Vol. 11 No. 2 AUGUST 1935 50 CENTS

CANADIAN GEOGRAPHICAL JOURNAL

UNIVERSITY OF MICHIGAN
AUG 15
PERIODICAL READING ROOM

THE CANADIAN GEOGRAPHICAL SOCIETY

OTTAWA, CANADA

HONORARY PATRON

HIS EXCELLENCY THE RIGHT HONOURABLE VINCENT MASSEY, C.H.

HONORARY PRESIDENTS

CHARLES CAMSELL, C.M.G., LL.D., B.A. J. B. TYRRELL, M.A., LL.D., F.G.S.
CHARLES G. COWAN

BOARD OF DIRECTORS

Major-General H. A. YOUNG, C.B., C.B.E., D.S.O., C.D., B.Sc.E.E., President

Dr. C. J. MACKENZIE, Vice-President
Gen. A. G. L. McNAUGHTON, Vice-President
Dr. ARTHUR BEAUCHESNE, Vice-President

Mr. GORDON F. MACLAREN, Q.C., Honorary Counse
Mr. A. G. MORDY, Honorary Treasurer
Mr. E. S. MARTINDALE, Honorary Secretary

Hon. A. E. ARSENAULT, Charlottetown, P.E.I.
Dr. MARIUS BARBEAU, Ottawa
Dr. BENOIT BROUILLETTE, University of Montreal, Montreal, Que.
Mr. R. H. CHESSHIRE, General Manager, Hudson's Bay Company, Winnipeg, Man.
Mr. D. M. COOLICAN, Canadian Bank Note Company, Ottawa
Col. A. F. DUGUID, Ottawa
Vice-Admiral H. T. W. GRANT, Ottawa
Mr. K. A. GREENE, Ottawa
Mr. ERIC L. HARVIE, Q.C., Calgary, Alta.
Mr. GILBERT LaBINE, Toronto, Ont.
Dr. B. R. MacKAY, Ottawa
Dr. N. A. M. MacKENZIE, President, University of British Columbia, Vancouver, B.C.
Mr. T. H. MANNING, Ottawa

Lt.-Col. SIDNEY C. OLAND, Halifax, N.S.
Hon. N. M. PATERSON, The Senate, Ottawa
Mr. R. E. POWELL, President, Aluminum Company of Canada Limited, Montreal, Que.
Mr. R. GORDON ROBERTSON, Deputy Minister, Department of Northern Affairs and National Resources, Ottawa
Dr. H. J. ROWLEY, Resources Development Board, Fredericton, N.B.
Mr. V. W. SCULLY, Steel Company of Canada Limited, Hamilton, Ont.
Col. C. P. STACEY, Historical Section, Canadian Army, Ottawa
Dr. A. W. TRUEMAN, Government Film Commissioner, National Film Board, Ottawa
Sir ALBERT WALSH, Chief Justice, St. John's, Newfoundland
Prof. J. T. WILSON, University of Toronto, Toronto, Ont.

Executive-Secretary and Editor of Publications

GORDON M. DALLYN

Editorial Committee

W. EGGLESTON, Ottawa, Chairman — H. L. TRUEMAN, Ottawa, Vice-Chairman

Dr. F. J. ALCOCK, Ottawa
Miss MALVINA BOLUS, Victoria
Dr. GEORGE W. BROWN, Toronto
Mr. E. BUSSIERE, Ottawa
Mr. J. W. CHURCHMAN, Regina
Dr. PIERRE DAGENAIS, Montreal
Dr. ARCHIBALD A. DAY, Ottawa
Dr. G. V. DOUGLAS, Halifax
Dr. G. A. FRECKER, St. John's, Nfld.
Dr. F. KENNETH HARE, Montreal
Dr. M. E. LaZERTE, Edmonton
Dr. R. O. MacFARLANE, Ottawa
Mr. I. S. McARTHUR, Ottawa
Abbé ARTHUR MAHEUX, Quebec
Mr. OLIVER MASTER, Ottawa
Dr. D. F. PUTNAM, Toronto
Mr. B. T. RICHARDSON, Toronto
Dr. J. E. ROBBINS, Ottawa
Dr. LLOYD W. SHAW, Charlottetown
Mr. R. J. C. STEAD, Ottawa
Mr. D. M. STEPHENS, Winnipeg
Dr. M. Y. WILLIAMS, Vancouver

Auditors: Davis, Bishop & Company, Chartered Accountants

The Society's ambition is to make itself a real force in advancing geographical knowledge, and in disseminating information on the geography, resources and people of Canada. In short, its aim is to make Canada better known to Canadians and to the rest of the world.

As one of its major activities in carrying out its purpose, the Society publishes a monthly magazine, the Canadian Geographical Journal, which is devoted to every phase of geography — historical, physical and economic — of Canada, of the British Commonwealth and of the other parts of the world. It is the intention to publish articles in this magazine that will be popular in character, easily read, well illustrated, and informative.

The Canadian Geographical Journal will be sent to each member of the Society in good standing. Membership in the Society is open to any one interested in geographical matters. The annual fee for membership is four dollars (Canadian currency).

The Society has no political or other sectional associations, and is responsible only to its members. All money received is used in producing the Canadian Geographical Journal and in carrying on such other activities for the advancement of geographical knowledge as funds of the Society may permit.

CANADIAN GEOGRAPHICAL JOURNAL

Published monthly by
THE CANADIAN GEOGRAPHICAL SOCIETY
Ottawa, Ontario
Editor - GORDON M. DALLYN

This magazine is dedicated to the presentation in authentic and popular form, with extensive illustrations, of the broad pattern of Canadian life and its industrial, physical, and cultural foundations.

The articles in this Journal are indexed in the *International Index to Periodicals* and in the *Canadian Index.*

The British standard of spelling is adopted substantially as used by the Government of Canada and taught in most Canadian schools, the precise authority being the Concise Oxford Dictionary, fourth edition, 1951.

Address all communications regarding change of address, non-delivery of Journal, etc., to the publication office, 1000 St. Antoine St., Montreal 3, Canada, giving old and new address. On all memberships, the expiry date will be printed on wrapper. This will constitute a receipt for subscription.

Membership dues of The Canadian Geographical Society, which include postpaid delivery of the Journal, are $4.00 per year in any country, payable at par in Ottawa.

Member Audit Bureau of Circulations

Head office: 54 Park Ave., Ottawa 4 (Tel. 6-7493)

SPECIAL REPRESENTATIVES:

Ontario and Quebec: F. A. DALLYN

Quebec office: W. F. P. MacRAE, 1000 St. Antoine St., Montreal 3 (Tel. UN. 6-5285)

Ontario office: 21 King St. E., Toronto

Europe: S/L W. H. CORKILL, M. B. E., The Mead, West Dumpton Lane, Ramsgate, Kent, England.

CONTENTS

AUGUST, 1955 ✦ VOLUME LI ✦ NUMBER 2

COVER SUBJECT:—*A graceful limber pine silhouetted dramatically against the sky in the Bow River Forest Reserve of Alberta.*
Richard Harrington

	Page
ALBERTA THROUGH THE YEARS *by HUGH A. DEMPSEY*	42
THE ISLAND GALAXY OF GEORGIAN BAY *by ADELAIDE LEITCH*	58
FORESTRY IN NOVA SCOTIA *by LLOYD S. HAWBOLDT*	66
SOREL—PAST AND PRESENT *by D. R. WESTON*	84
HARNESS-RACING IN PRINCE EDWARD ISLAND *by JOHN B. MURLEY*	90
EDITOR'S NOTE-BOOK	V
THE TRAVEL CORNER	VI

NOTE:— *Pages 1-40 (numbered 237-276) included in Volume LI, No. 1.*

✦

CONTENTS OF THIS JOURNAL ARE COPYRIGHT

AUTHORIZED AS SECOND CLASS MAIL, POST OFFICE DEPARTMENT, OTTAWA

PRINTED IN CANADA

Old buildings of Fort Edmonton (foreground) and Legislative Buildings under construction about 1910.

Alberta Through the Years

by HUGH A. DEMPSEY

Alberta Government photographs unless otherwise credited.

Introduction

FIFTY years ago, a frontier land of prairies, woodlands, foothills, and mountains officially became the Province of Alberta. Behind it was a rich heritage of pioneering explorers, fur traders, ranchers, and farmers, while ahead lay a future which promised wealth and happiness for its people. And now, on her fiftieth birthday, the Princess Province has surpassed even the most optimistic hopes of her pioneers; she has become a national leader in agriculture and industry.

The people of Alberta are proud of their province and this year their pride takes a tangible form of expression. Throughout the province there are fairs, ceremonies, and gala events planned to celebrate the occasion. Cairns and markers are being unveiled, and tributes paid to Alberta's fifty years of progress. The nation will know that the past half-century has been a happy and successful one.

The Government of Alberta, too, has done its part to help in the celebration. Two fine new auditoriums are being constructed in Edmonton and Calgary as lasting monuments to the

golden jubilee, senior citizens are being presented with honour scrolls, songs and pageants have been written, and many other government-sponsored programs are taking place.

In the measurement of years, Alberta's documented history is a short one. It was only 201 years ago when the first white man gazed upon the beautiful land, and only 177 years ago when the first permanent structure was built.

The fur trading era—1778 to about 1874—is well documented through the journals and diaries of such men as Duncan M'Gillivray, Alexander Henry, David Thompson, George Simpson, and many others. Of this period, too, are the missionary records left by Robert Rundle, John McDougall, Father Albert Lacombe, Father Emile Grouard and others.

Each paints a vivid picture of the hardships and perils on the frontier, but often these were men of vision who realized the important role they were playing in wresting a new land from the wilderness. Could any of these men gaze upon the Alberta scene of today, they would realize that even their greatest hopes had been surpassed. Modern railways and automobiles have replaced the old Red River carts and saddle-horses; cities have grown from stockaded trading posts; beautiful churches have replaced the crude log missions; and industry and agriculture are providing a bountiful living for more than a million people.

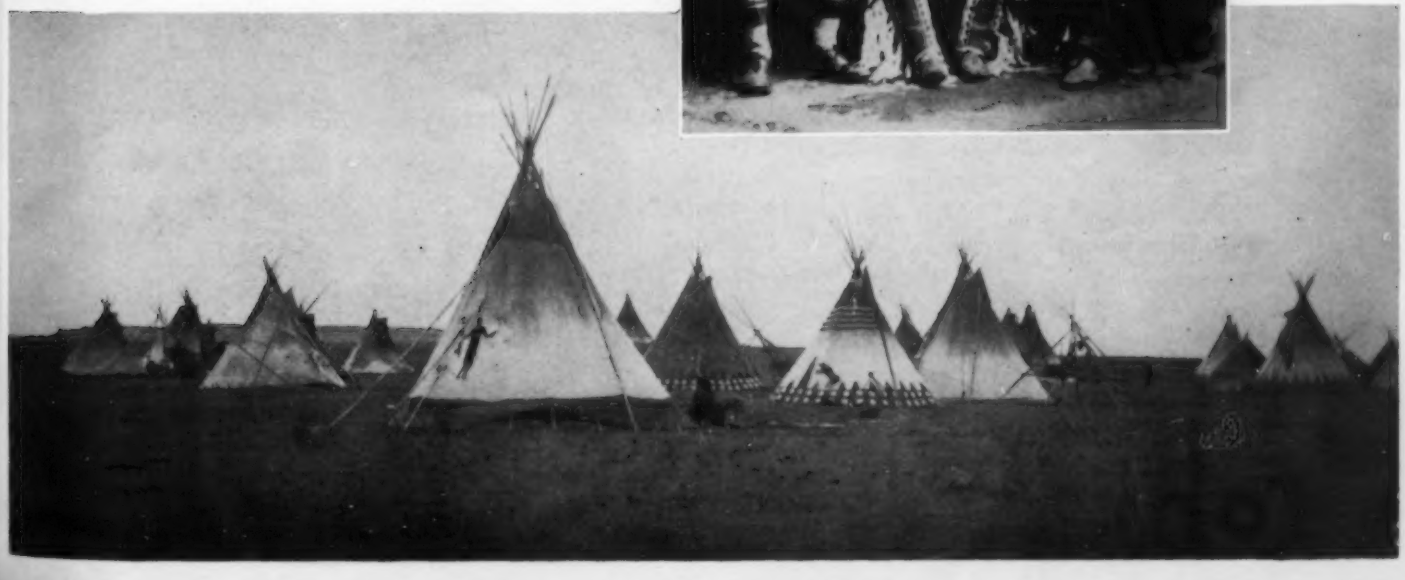
History

The first white man to visit what is now the Province of Alberta was Anthony Henday, a Hudson's Bay Company employee. He had left York Factory on the shores of Hudson Bay in 1754 to travel to the western "meadows" in an attempt to lure the Indians east with their valuable supplies of furs. Henday was the first to meet the nomadic Blackfeet Indians and the first to see the Canadian Rockies. But he failed in his mission; the Indians were happy and free in their primitive life and saw no reason to make the arduous journey to Hudson Bay for a few of the white man's trinkets and utensils.

Several decades passed before Alberta finally became a part of the great fur trading empire. The Hudson's Bay Company had been content to rest in its fortified posts and let the Indians bring their furs great distances to it. When an energetic group of men in Montreal

Two prominent missionaries are seen in 1886 with chiefs of the Cree and Stoney nations. At right, seated, is Rev. John McDougall, the famous Methodist missionary; at rear, left, is Rev. R. B. Steinhauer, a full-blooded Indian who worked as a missionary among the Crees. At front, left, is Jonas Big Stoney, and in the centre is Pakan, noted head chief of the Cree nation. At rear, right, is Samson, chief of the Crees.

Below:—Blood Indians under their leader, Thunder Chief, camp near the Belly Buttes in southern Alberta. These Indians are part of the great Blackfeet nation which ruled the Alberta prairies until 1880.



The early ranchers of southern Alberta brought thousands of head of cattle overland from the United States to establish a flourishing business on the rolling prairies. Here is a group of ranchers with their cattle near Calgary in the middle 1880s.

organized a competitive company, everything was changed. The young organization, called the North West Company, was not content to wait for the Indians. Instead, it took its goods far to the west, trading in the Indian camps and intercepting tribes on their long journey to Hudson Bay.

In order to survive, the Hudson's Bay Company moved westward—usually a short step behind the North Westers. Past Lake Winnipeg, along the North Saskatchewan River and through the north, the companies built post after post until finally, in 1778, Peter Pond crossed Methye Portage and paddled down the Clearwater River into Alberta. He passed what is now Fort McMurray and travelled down the Athabasca to establish a wintering post.

During the next several years, both the Hudson's Bay and the North West Company built posts all along the Athabasca, the Peace, and the North Saskatchewan. By 1794, the first in the series of forts named Edmonton and Augustus had been established.

The two companies were in constant competition, sometimes to the point of open warfare. But their struggle ended in 1821 with the amalgamation under the name of the Hudson's Bay Company. For the next half-century, this great company operated almost completely unopposed in the west. Its only competition came from the American Fur Company on the upper Missouri River in Montana.

The first attempt to bring religion to Alberta was in 1840, when Rev. Robert Terrill Rundle, a Methodist missionary, arrived at Fort Edmonton. For the next eight years he devoted his life to the Indians, Metis and white traders. Although often in ill health, he travelled thousands of miles by horse, in carrioles and on foot to visit his flock at Lesser Slave Lake, Rocky Mountain House, the Bow River, and throughout the prairies of central Alberta. When he was forced to return east in 1848 because of ill health, he had made such an impression on the Indians that several years later, his successor found the Stoneys still singing Christian hymns and holding religious services.

Upon the heels of Rev. Robert Rundle came the first Roman Catholic missionary in Alberta. He was Father Jean Thibault, who came to Fort Edmonton from Red River in 1842. The priest stayed only for the summer, but returned in the following year to establish a permanent mission at Lac Ste. Anne.

The early religious development was generally divided between these two groups—the Methodists and the Oblates. Each had such

Colin Fraser, a free-trader, sorts $35,000 worth of furs which were purchased from the Indians of northern Alberta in the 1890's.

A three-horse team pulls an old binder during farming operations near Calgary in 1885. Even at that early date the importance of farming was beginning to overshadow that of the large-scale ranches in the southern part of the province.

great men in Alberta as Rev. George McDougall and his son, Rev. John McDougall, Father Albert Lacombe, Father Emile Grouard, Rev. Thomas Woolsey, Father Emile Legal, Rev. John Maclean and Bishop Vital Grandin. Other religious groups such as the Anglicans, Presbyterians and Baptists arrived in the latter part of the century and also made important contributions to the religious needs of early settlers.

In the 1860s, the west was still controlled by the charter of the Hudson's Bay Company, granted in 1670. However, in 1869, an agreement was made with the Canadian Government whereby Rupert's Land—the area now made up of Alberta, Saskatchewan and adjacent lands—was relinquished by the Hudson's Bay for $1,350,000 (£300,000).

In Montana, after the American Fur Company had been dissolved, numerous adventurers and free traders—many of them veterans of the Civil War—watched the transaction with interest. The transfer of the area to the Canadian Government meant that the Hudson's Bay no longer had control of the west, while at the same time Canada had made no arrangements for the administration of the territory.

Therefore, in the spring of 1869, two traders, John J. Healy and Alfred B. Hamilton, constructed Fort Hamilton at the confluence of the Oldman and St. Mary Rivers, just west of the present city of Lethbridge. During the first year they grossed some $50,000, draining much of the trade from the Hudson's Bay Company.

In 1870, they constructed on the same site a new post which became famous under the colourful title of Fort Whoop-Up. Other posts operated by free-traders in southern Alberta

A winter supply of furs was loaded on these ox-carts in the 1890s to be hauled to the Hudson's Bay post at Edmonton. In many sections of Alberta the trails through muskegs would permit only light carts to pass. But in the south huge ox-trains and mule teams were used to transport goods.

were Fort Kipp, Slideout, Standoff, Spitzee Post, Kanouse's Post at Calgary, and several others.

In the summer of 1874, the scarlet-coated North-West Mounted Police set out from Dufferin, Manitoba to suppress this illegal trading and to bring law and order to the western plains. One group went to Swan River, Manitoba, and another to Fort Edmonton, while the largest force proceeded to the centre of the "whisky trading" operations. Their first duty was to close all illegal posts and arrest any traders selling intoxicants.

The police expected a fight when they arrived at the impressive Fort Whoop-Up. But the post was abandoned; only an old man was left in charge. The traders had fled to Montana. The police travelled westward to an island on the Oldman River where a post was built and named Fort Macleod in honour of Col. James F. Macleod, the commanding officer. Meanwhile, the second force arrived at Fort Edmonton after an arduous journey and built Fort Saskatchewan. A short time later, Fort Calgary was constructed on the Bow River.

The establishment of law in Alberta was a peaceful one. The American traders either returned to Montana or became law-abiding pioneers, while the Indians were happy to greet their red-coated protectors.

Although the buffalo still was in fairly plentiful supply, the Canadian Government realized that the repeating rifles of the Indians and the work of white "hide hunters" were taking a rapid toll of the shaggy beasts. Therefore, arrangements were made to sign treaties with the Indians to provide for their future livelihood and to acquire the vast lands for settlement. The first Alberta treaty was signed with the Crees and Woods Stoneys in 1876, while in September of the following year, the famous Treaty Seven was signed with the Blood, Peigan, North Blackfeet, Sarcee and Stoney Indians. The northern Alberta tribes were the last to sign; in 1899 they accepted Treaty Eight.

When the last buffalo herds were killed in 1880-81, the Indians—starving and disillusioned—settled on their reserves. The issuing of rations to the natives and the purchasing of beef by the Mounted Police provided an excellent market for the large-scale ranchers. So almost immediately after the Indians had given up their nomadic life, the ranchers entered southern Alberta. Within a few years such large companies as the Cochrane, Waldron, New Oxley, and Circle were running thousands of head of cattle on the range recently vacated by the buffalo.

The Canadian Pacific Railway linked Alberta with the east in 1883, but other than providing an all-Canadian route and an easier means of communication and travel, the railway had little immediate effect upon agricultural development. Not until the construction of the Calgary and Edmonton Railway in 1890-91 did immigration take on large-scale proportions. Representatives of the Canadian Government toured farming areas of the United States and eastern Canada, telling the public about the opportunities in the west and soon each train was bringing carload after carload of settlers.

Methods of threshing have seen many changes over the years. At left an old steam-engine is used by the hired gang, while at right modern self-propelled combines efficiently perform the arduous labour in a fraction of the time.

An oldtime prospector searches for gold in the North Saskatchewan River near Edmonton in 1890. The contraption used to extract the gold dust from the sand and gravel is called a "grizzly".

By the turn of the century, Alberta's population had increased to such an extent that her problems could no longer be efficiently administered from the territorial capital at Regina. Therefore, in February, 1905, the Autonomy Bill was officially introduced in the House of Commons. Known more popularly as the Alberta Act, this bill provided for the incorporation of the province, with an initial grant of $1,000,000 and five yearly grants of $312,000 to cover the initial cost of provincial construction. The bill was passed on July 5 and was approved by the Senate two weeks later.

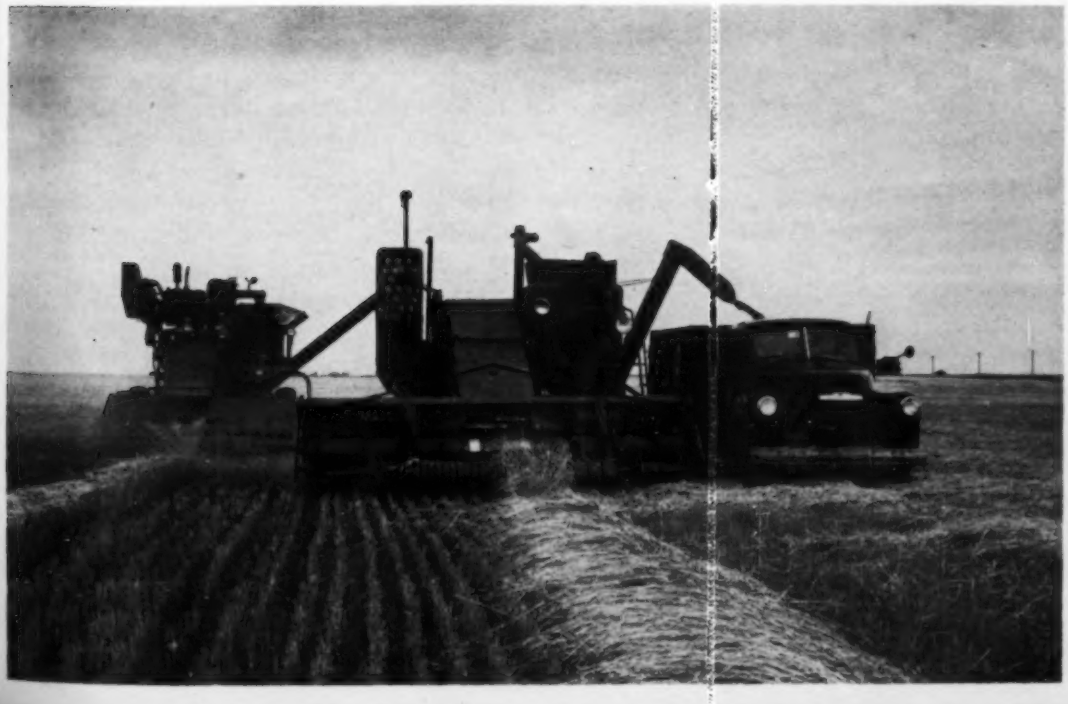
September 1 was set as the official inauguration day, when both Prime Minister Sir Wilfrid Laurier and Governal General Earl Grey were on hand to welcome the new province into Confederation.

"The possibilities of Alberta are not yet half discovered," commented a local newspaper in 1905. "The true greatness of the province is comparatively unknown. But now, with her own provincial administration, the promises for the future are bright indeed."

Agricultural Progress

The first attempt to till the soil in Alberta was made in 1779 when Peter Pond, a trader with the North West Company, planted a "kitchen garden" near Lake Athabasca. By 1825, grain had been introduced to the Fort Vermilion district where small crops of barley were successfully grown.

But the real development of agriculture in Alberta was started by the Oblate priests at such missions as Lac La Biche, Lac Ste. Anne and St. Albert. The first wheat was grown at Lac La Biche mission in 1855 and in the years that followed, root crops and grain were raised for local use and for sale to trading posts.



Cattle graze today in the Highwood Pass, one of the most beautiful areas along the Coleman-Kananaskis highway. Each summer more than 21,000 head of cattle graze on the ranges of the Rocky Mountain Forest Reserve, made accessible by this highway.

Father Albert Lacombe made important agricultural contributions by introducing the plough for use by the Indians and Metis, while in 1863 he constructed the first grist mill in the province.

So successful were the priests in agricultural work that in 1873 the Oblates brought the first wheat prize to Alberta; it was a sample from Fort Chipewyan entered in the Centennial Exposition at Philadelphia.

One of the greatest agricultural contributions in the Peace River district was made by Rev. J. Gough Brick, an Anglican missionary who established the Shaftesbury mission in the early 1880s. Here he taught the Metis to grow grain and vegetables and, in 1896, his sample of Red Fife wheat gained international prominence at the Columbian Exposition in Chicago.

While beginning in the 1880s, the rush for homesteads in Alberta reached its peak in the 1890s after the construction of the C. and E. Railway. Thousands of farmers from eastern Canada, the United States and Europe arrived with their effects to carve a new life in a new land. This surge of immigration continued into the twentieth century, with 1907 and 1910 being particularly remembered as peak immigration years.

Since Alberta's formation as a province in 1905, tremendous advances have been made in every field of agriculture. By 1954, the estimated value of Alberta's field crop production was $303,980,000, or more than 46 times greater than the 1906 production of $6,590,960. Similarly, the value of livestock was $216,378,000, or 600 per cent greater than the 1906 value of $36,191,500.

These figures reveal the startling advances of a half-century, during which time Alberta was transformed from a frontier area to a modern land of farms, ranches, railways and highways.

Many things have contributed to this advance. The most important, naturally enough, was the tremendous influx of settlers from all parts of the globe. The pioneers hacked away the brush or broke the virgin prairies to sow their precious seed. And, in recent years, new pioneers have pushed northward, carving modern farms from the frontier areas in the Peace River and Fort Vermilion areas.

Advances in irrigation have done much for agriculture in the last fifty years. The program

of federal and provincial governments in southern Alberta has opened thousands of acres of dry land for settlement. And it has made Alberta an important centre for the production of sugar beets and vegetables. Production of sugar beets in 1954 was valued at $310,000 for 442,607 tons of beets, while the vegetable crop meant $3,500,000 for the canning industry.

In the livestock industry, the improvement of quality has been much more impressive than any increase in the number of animals. At one stage of Alberta's history, thousands of cattle were herded on the fenceless plains. But such winters as 1886-87 and 1906-07 caused the deaths of countless range animals and were a major contributing factor to the eventual breaking up of large-scale ranches.

What the early rancher had in quantity he lacked in quality. The average range animal was a hardy but poor class "critter" which was left to forage all year around. Then, during the shift from large-scale to small-scale ranching, many top quality animals were imported from the United States, Scotland, and eastern Canada to improve the general class of livestock.

This brought the bull sales into Alberta, the first being held in Calgary in 1901. Since that time, it has usually been the Calgary sale which has set the comparative market for the west. An example of the increase in quality of pure-bred bulls is the average price of $87.17 in 1901, compared to $342 in 1955.

Today, the average farm or ranch home in Alberta is as modern as any city dwelling, giving mute evidence of the prosperity of agricultural life. Rural electrification, natural or propane gas, and many other developments have brought all the luxuries of the city to rural homes.

Industrial Development

The first attempt to develop Alberta's natural resources was made in 1869 when Nicholas Sheran, a gold prospector, discovered a seam of coal near Fort Whoop-Up, west of the present city of Lethbridge. Sheran immediately abandoned all thought of gold and successfully turned the seam into a one-man industry.

At that time, Fort Whoop-Up was the only settlement in southern Alberta and was accessible only by wagon trains from Fort Benton, Montana. Sheran was shrewd enough to know that coal was in short supply in Fort Benton and that wagon trains hauling trade goods to Alberta returned empty. Sheran mined the coal and sold it to the freighters, who in turn made a handsome profit in Montana.

So Alberta's first industry not only found a ready market, but it was primarily for export.

Previous to this time, the major activities in Alberta had been fur trading, trapping, freighting, and gold prospecting. Although signs of gold were found in the North Saskatchewan River, there were never sufficient quantities to establish an industry.

When farming and ranching reached sizable proportions, allied industries began to appear. In 1883, a woollen mill was established at Midnapore by S. W. Shaw, where it remained in operation for more than 40 years. In 1888,

Transportation has seen many changes during the development of Alberta. Today modern diesel locomotives pull sleek streamlined coaches across the province.

This husky logger rolls a spruce log into the water at a mill near the Canadian Rockies. Much of the lumber used in Alberta's construction work comes from the forests of spruce and pine in the west of the province.

Below: Lumbering has always played an important role in Alberta's economic development. In the pioneering days logs were used for trading posts, houses, boats and other structures.

Ebenezer Healy established Alberta's first cheese factory at Springbank, west of Calgary. In 1890, Pat Burns started the first meat packing plant in Calgary—the nucleus of the multi-million dollar Burns and Co. Ltd. chain. In 1894, a linen mill operated for a short time at Stirling and, before the turn of the century, creameries produced butter for local consumption; flour mills dotted the settled areas; tanneries and carding mills were established; and many other pioneer industries dependent upon agriculture were opened by far-sighted businessmen.

From these humble beginnings, industries allied to agriculture rapidly expanded as the province's farming areas were enlarged. At the present time, many of these industries have become important factors in Alberta's economic life. For example, the value of creamery butter increased from $415,792 in 1906 to $17,613,353 by 1954. Factory cheese production increased from $13,000 to $864,173; flour mills from $1,115,250 in 1906 to $28,335,740 in 1954; and packing plants from $175,000 to $43,500,000.

As the population of Alberta increased, so did the development of the province's natural resources. From Sheran's one-man mine on the St. Mary River, coal mining rapidly increased in importance. Production climbed from 43,220 tons in 1886 to 340,275 tons by 1906. The industry continued to expand, serving both domestic and railway markets, increasing production to an all-time peak of 8,824,455 tons by 1946. During this time, Alberta's coal reserves were estimated at 71,821,450,000 tons—the largest in Canada. However, the changing of

railway engines from steam to diesel and the popularity of natural gas for domestic purposes after 1946 rapidly curtailed the available markets. This resulted in a steady decline, reaching 4,859,136 tons in 1954, or almost half the 1946 production.

Alberta's forests have been a valuable asset to man since the days when the Indians used lodgepole pine for their tipi poles. The first frame house was constructed in the Pincher Creek area when W. S. Gladstone whipsawed the lumber at Mountain Mill. The first sawmills were established in the early 1880s, while John Walters opened the first Edmonton mill in 1881. In 1885, the first sash and door factory was constructed at Calgary by W. H. Cushing and W. Jarrett, with the Bow River and Eau Claire mills being built in the following year.

In 1917, there were 52 sawmills in Alberta producing $789,000 worth of lumber annually. By 1954, the value of forestry production was $14,160,000, while plans were announced for the construction of a huge pulp mill in the Hinton area to use the vast reserves of timber suitable for paper production.

While petroleum and natural gas are sometimes considered to be newcomers to Alberta's industrial field, such is not the case. Peter Pond observed the bituminous sands in 1778 and for generations they were used for caulking boats and repairing canoes.

Geological investigations of Alberta's petroleum deposits were made in 1878, and there was interest in developing the industry as early as 1885, when natural gas was accidentally discovered northwest of Redcliff by the C.P.R. In the same year, a company equipped with a rig capable of drilling 2,800 feet announced plans for oil exploration.

"Petroleum or gum springs exist on the North Saskatchewan," the company announced. "Will not some one who knows of their exact locality take the matter in hand and help in the development of what cannot but prove a most important source of wealth ?" However, the venture was a failure.

In the following year, oil seepages near Waterton Lakes were collected by John "Kootenai" Brown and sold at $1 a gallon for machinery grease. In 1888, W. S. Lee discovered

Irrigation has poured life-giving waters onto the arid lands of southeastern Alberta. This inverted siphon carries water to the Grassy Lake project in an area where farming was believed impossible. Sugar beets, vegetables and grain are raised in large quantities in reclaimed areas.

Although many coal mines in Alberta have closed their doors, there are still several which provide coal and briquettes for domestic and industrial purposes. This is part of the Lethbridge Collieries across the Oldman River from Lethbridge.

a seepage in the Crowsnest Pass area which gained widespread attention in eastern Canada and the United States. The Southern Alberta Land Development Co. was organized, but because of gravel and boulders encountered during drilling operations, their work was abandoned.

The year 1890 brought gas to Medicine Hat, a fact which caused Kipling to describe it as the "city with all Hell for a basement". During the 1890s, projects included drilling at Athabasca and Pelican Rapids, where natural gas was found, and exploratory operations in the Waterton-Pincher Creek area.

From 1900 until 1914, numerous projects were undertaken in the province. In 1902, the Rocky Mountain Developing Co. struck oil in the Waterton area, thus creating the picturesque community called Oil City. Soon after the turn of the century, A. W. Dingman organized the Calgary Natural Gas Co. which struck gas within the present limits of Calgary. Two years later, a line was laid to the local brewery and eventually to East Calgary. During the 1910-14 period, several gas wells were discovered in the Bow Island area, becoming the main source of supply for Calgary, Lethbridge and Fort Macleod.

In 1912, Calgary Petroleum Products was organized by A. W. Dingman and two years later a major oil strike was made at Turner Valley. This caused Alberta's first oil boom—a fantastic period when people lined the streets to purchase oil stocks. In 1924, interest in Turner Valley was again revived when Royalite Oil Co. brought in a tremendous flow of natural gas and highly volatile naphtha gasoline. Drilling operations continued until 1929, when Home No. 1 became a prolific oil producer, yielding 700 barrels a day.

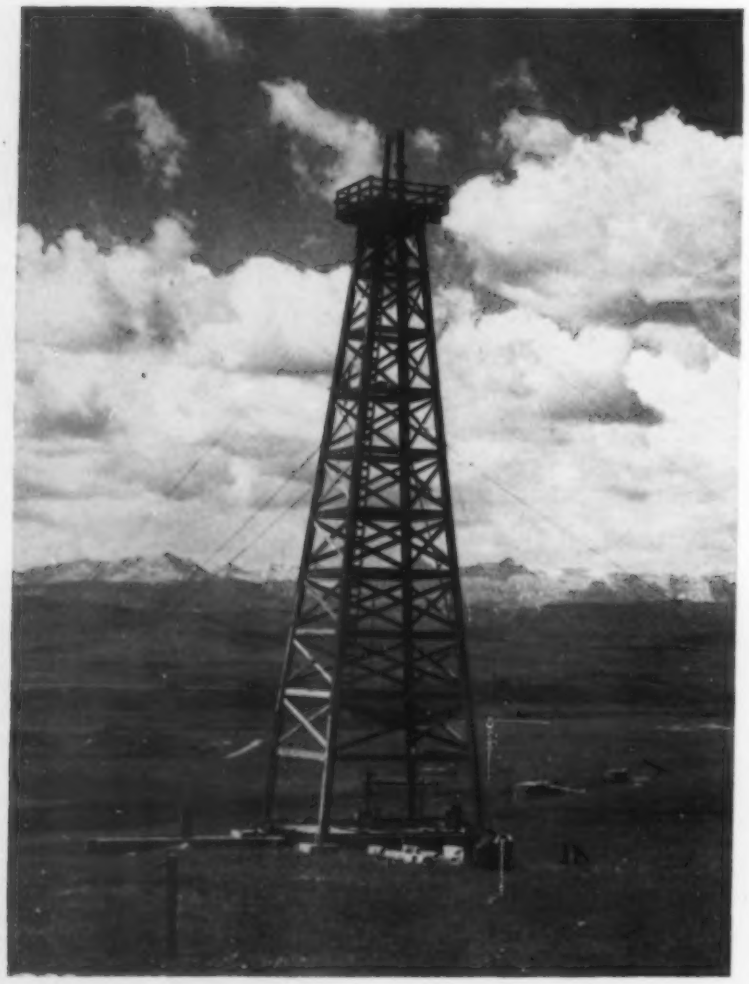
During 1929, Alberta's oil production more than doubled, with an output of 999,152 barrels, compared with 489,531 in the previous year and 56,599 for the accumulated period of 1914-21. Production maintained this general level until 1936, when a new discovery was made on the western edge of the field. The intensive development which followed pushed the production from 1,320,442 barrels in 1936 to 7,594,411 by 1939. The development continued until 1942, when the peak of more than 10,000,000 barrels was reached.

However, because it was fully developed, Alberta's first major oil field began to wane. Within five years the production was hardly half the 1942 output and companies began to look elsewhere for another field.

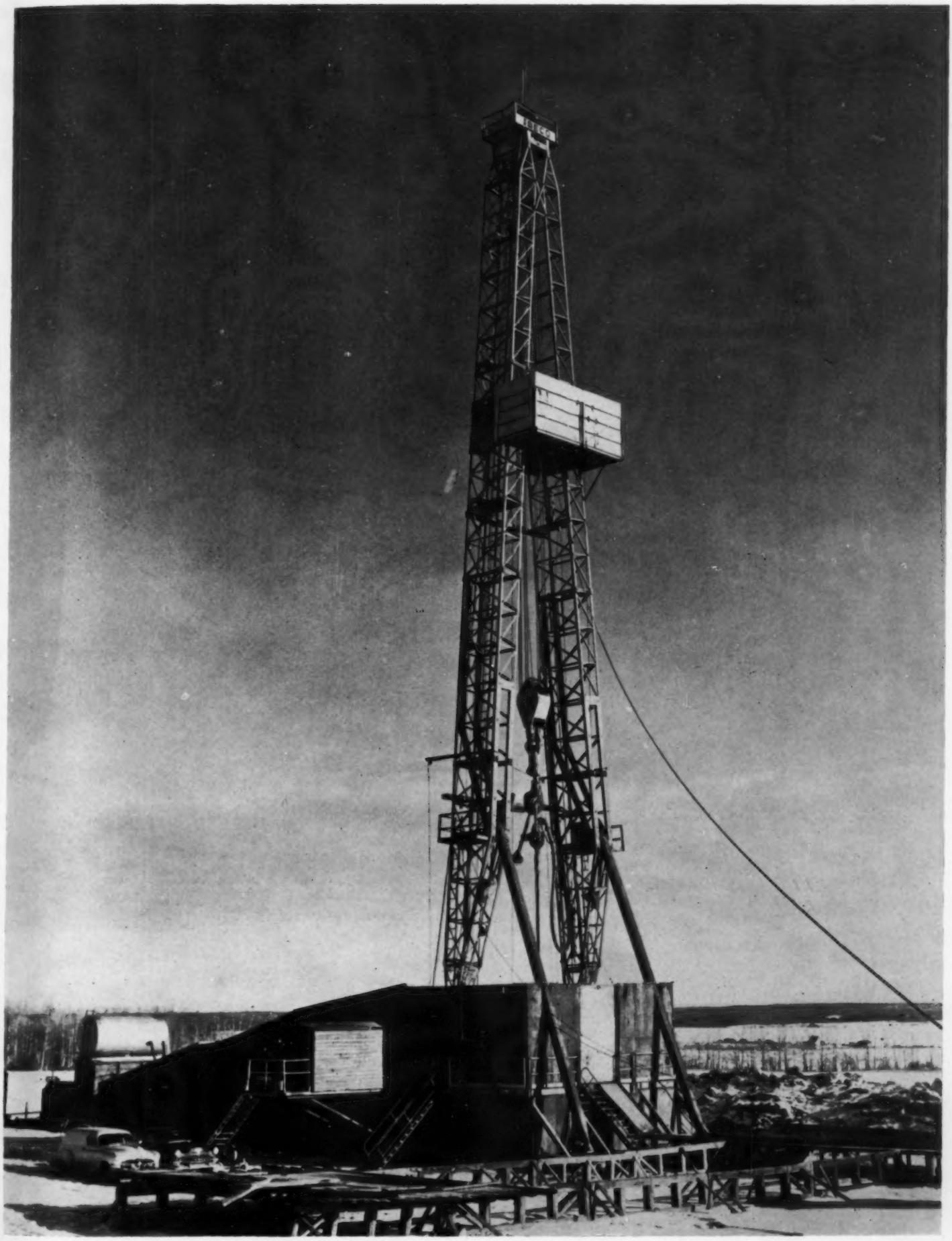
On February 13, 1947, Imperial Oil Ltd. brought in the discovery well at Leduc—the beginning of a new era. Other companies quickly rushed into the area and, within a year, 43 major producers had been drilled and the reserves for the field were some 250,000,000 barrels.

In 1948, the Redwater field was discovered and the reserves estimated at 500,000,000 barrels. This was followed by discoveries at Golden Spike, Woodbend, and throughout the Edmonton area. The rapid pace soon spread through the length and width of Alberta, reaching the Peace River, Lloydminster, Rocky Mountain House and Pakowki at extreme points in the province.

Production soared with these new discoveries, reaching an all time peak in 1954 of 87,713,855 barrels, valued at some $227,877,500. During



An old wooden derrick in the Turner Valley field, left standing after oil-drilling had finished.



Evidence of the changes in the oil industry during the past half-century is this modern steel derrick. It is transported from site to site. Only a pump or "Christmas tree" remains at the well-head.

the same period, natural gas production was worth $1,979,471.

To utilize the vast reserves of crude oil and natural gas, huge refineries were constructed and allied industries developed on the eastern outskirts of Edmonton, in the oil fields, and at key points in the province. These produce plastics, sulphur, cellulose acetate, nickel products, asphalt building materials, and a major portion of the west's refined oil and gasoline.

To meet the requirements of areas outside Alberta, the Interprovincial and Trans Mountain pipelines were constructed to carry crude oil to eastern Canada and British Columbia.

Although the total value of the oil and natural gas industry does not compare with agriculture in Alberta, it has still become a vital economic factor in the province's growth. It has meant a general trend towards the industrialization of a basically agricultural area.

Several non-metallic minerals also are produced in Alberta. Sulphur, a direct by-product of the petroleum industry, is becoming increasingly important, attaining a production of 22,320 tons in 1954. Other non-metallic minerals include cement, salt and clay.

The first cement plant came into operation at the turn of the century and by 1954, the industry had an annual production value of $7,685,930. The first attempts to mine salt were made in 1907, with production steadily increasing to reach the 1954 peak of 31,568 tons. Medicine Hat has maintained supremacy as the ceramics centre of Alberta since 1910, and is a leading producer of pottery, dishes, glazed pipes, and other products.

Alberta Today

The modern Province of Alberta has an estimated population of more than one million persons. The capital, Edmonton, has 214,700 people, while Calgary, her sister city of the south, has 165,000. Other Alberta cities are Lethbridge (28,300), Medicine Hat (18,825), Red Deer (10,789), Camrose (5,600), Wetaskiwin (4,200), and Drumheller (2,600).

The main sports in Alberta include hockey, curling, baseball, football, and golf, while

The discovery of oil in the Leduc, Redwater, and other fields has led to the construction of multi-million-dollar refineries and petro-chemical plants on the eastern outskirts of Edmonton. Above, in the foreground, is the McColl-Frontenac refinery, while in the distance are the British American refinery and storage tanks of Interprovincial and Trans Mountain Pipelines.

other pastimes are the western rodeos, hunting, fishing, skiing, and skating. Large curling rinks have been constructed in almost every town in the province, while Edmonton and Calgary have stadiums, arenas, and parks. Numerous awards for events in hockey, skating, and basketball have been won in national and international competitions. The Grey Cup, emblematic of professional football supremacy in Canada, was won by Calgary in 1948 and Edmonton in 1954.

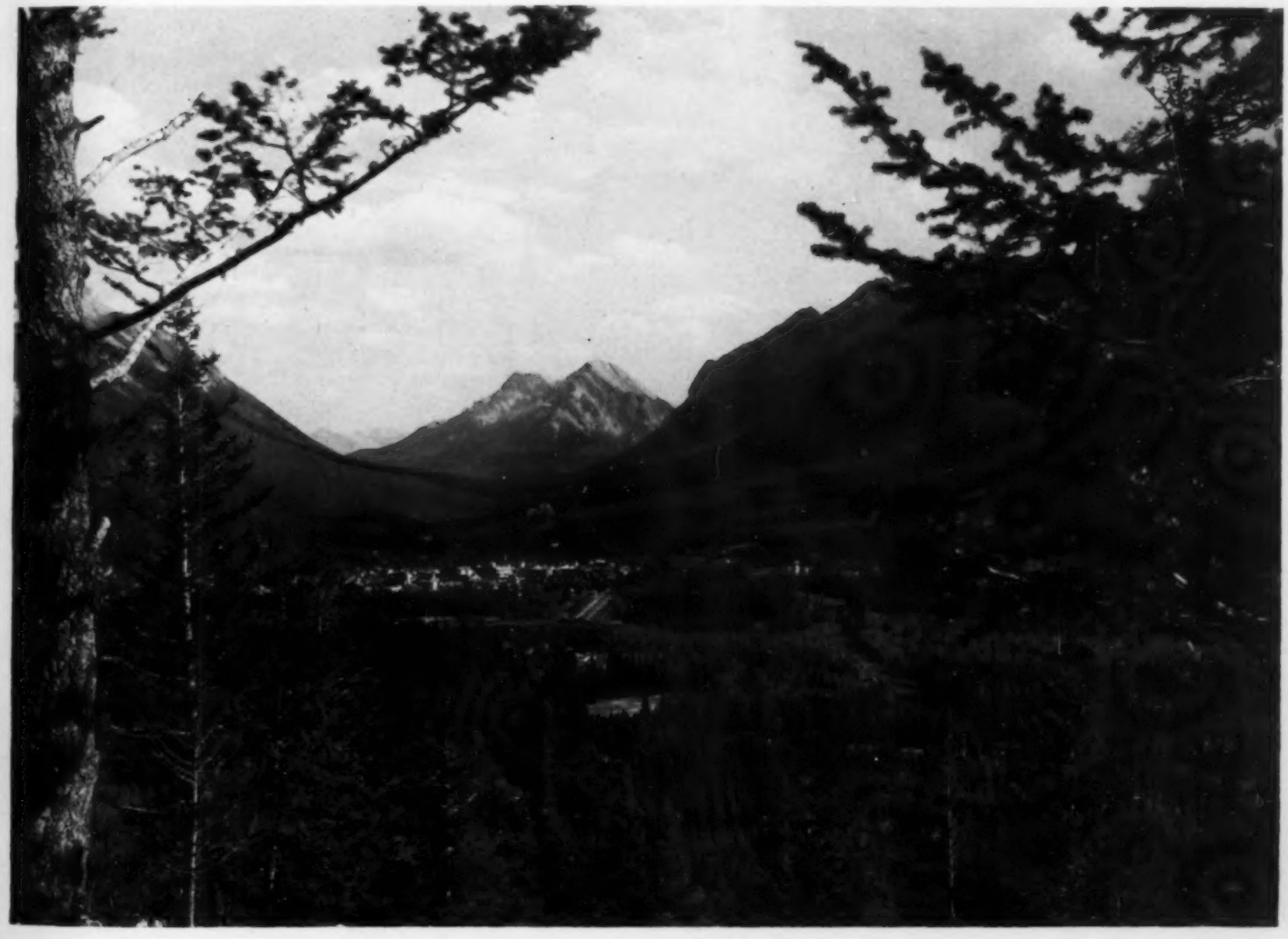
Alberta has long been famous as a tourist resort with the beautiful Canadian Rockies beckoning visitors from all parts of the globe. Each year, thousands of people holiday-bound visit Banff, Jasper, Waterton Lakes, the Calgary Stampede and other colourful attractions.

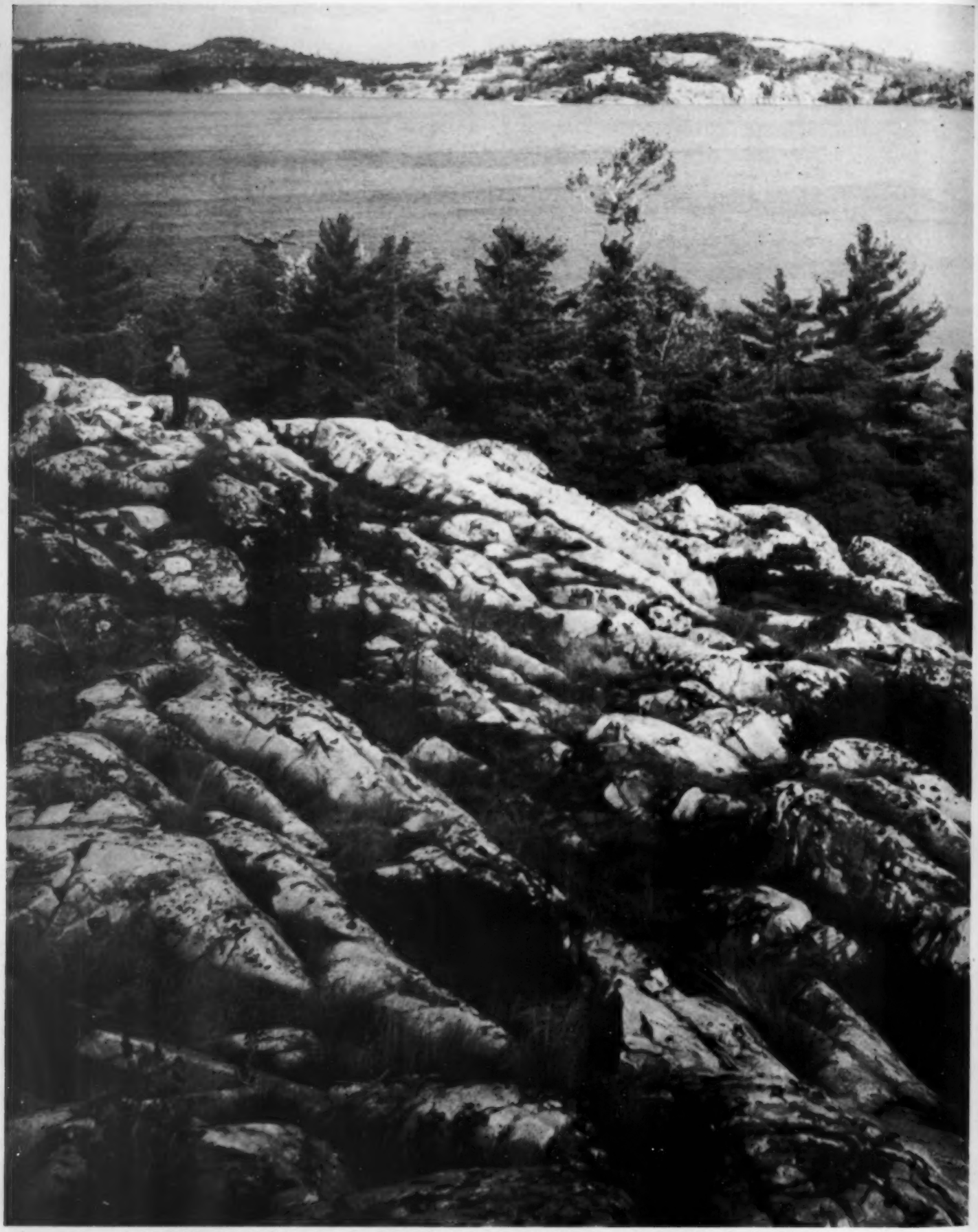
After 50 years as a province, Alberta has gained the reputation of a friendly western neighbour. She is blessed with a beautiful and fertile land, a happy people, and an enviable reputation in the fields of agriculture, industry, sportsmanship, and "western hospitality".

Top left:—This aerial view of Calgary shows the tall buildings of the downtown section in the centre, with the Bow River in foreground. T.C.A.

Bottom left:—Edmonton from the air, showing its size. It is said to be Canada's fastest growing city. In the foreground is the North Saskatchewan River, in the centre are the Alberta Legislative Buildings. The main downtown area is at right of centre.

Banff, visited by thousands of tourists every year, nestles in a valley surrounded by mountains.





In the Manitoulin Island area, particularly around Killarney, white rocks are found, often in long streamer-like formations as shown here. From a distance the hilltops appear snow clad.

The Island Galaxy of Georgian Bay

by ADELAIDE LEITCH

Photographs by the author

DRIBBLED haphazardly along the inner rim of Georgian Bay in Ontario is one of the unique island groups of America.

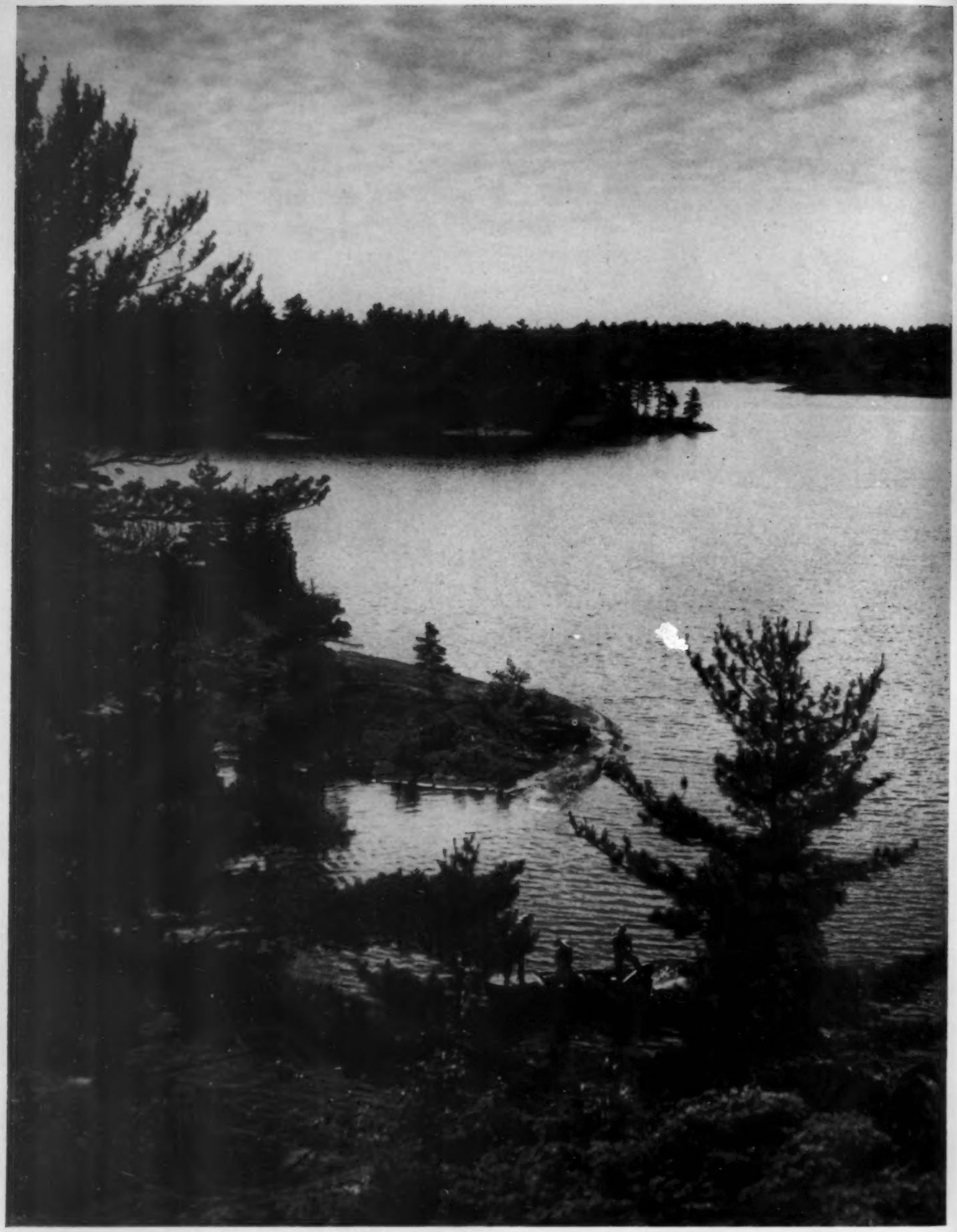
From the locks of Sault Ste. Marie in the northwest, to the ancient land of Huronia in the south, the "Thirty Thousand Islands" probably number closer to 97,000. They line the whole inner rim of the big Bay, trickling down past the French River, Pointe au Baril, Parry Sound, Copperhead and finally ending at Penetanguishene, site of the oldest settlement in Canada west of Quebec City.

In the early days of the seventeenth century, when Georgian Bay was still the Lake of the Attigouautans (the name of the bear clan of the Huron Indians), Samuel de Champlain paddled through the intricate galaxy, watched the gold-and-purple sunsets through the pines, built his campfires on the clean, rocky shores—the first important white man to do so. To replenish his larder, he fished for the bass, maskinonge and pickerel that would one day lure other travellers to the islands and prompt the Province of Ontario to set up some of its most important fish sanctuaries, including one of a thousand acres. The early Jesuit Fathers undoubtedly visited some of the islands, for they had established their headquarters of Fort Ste. Marie near the shores of Georgian Bay and the southern islands of the group. But probably the first white man to see the "Thirty Thousand" was an ill-starred young *coureur-de-bois*, largely ignored by history books except as the man who betrayed the French to the English—Etienne Brulé.

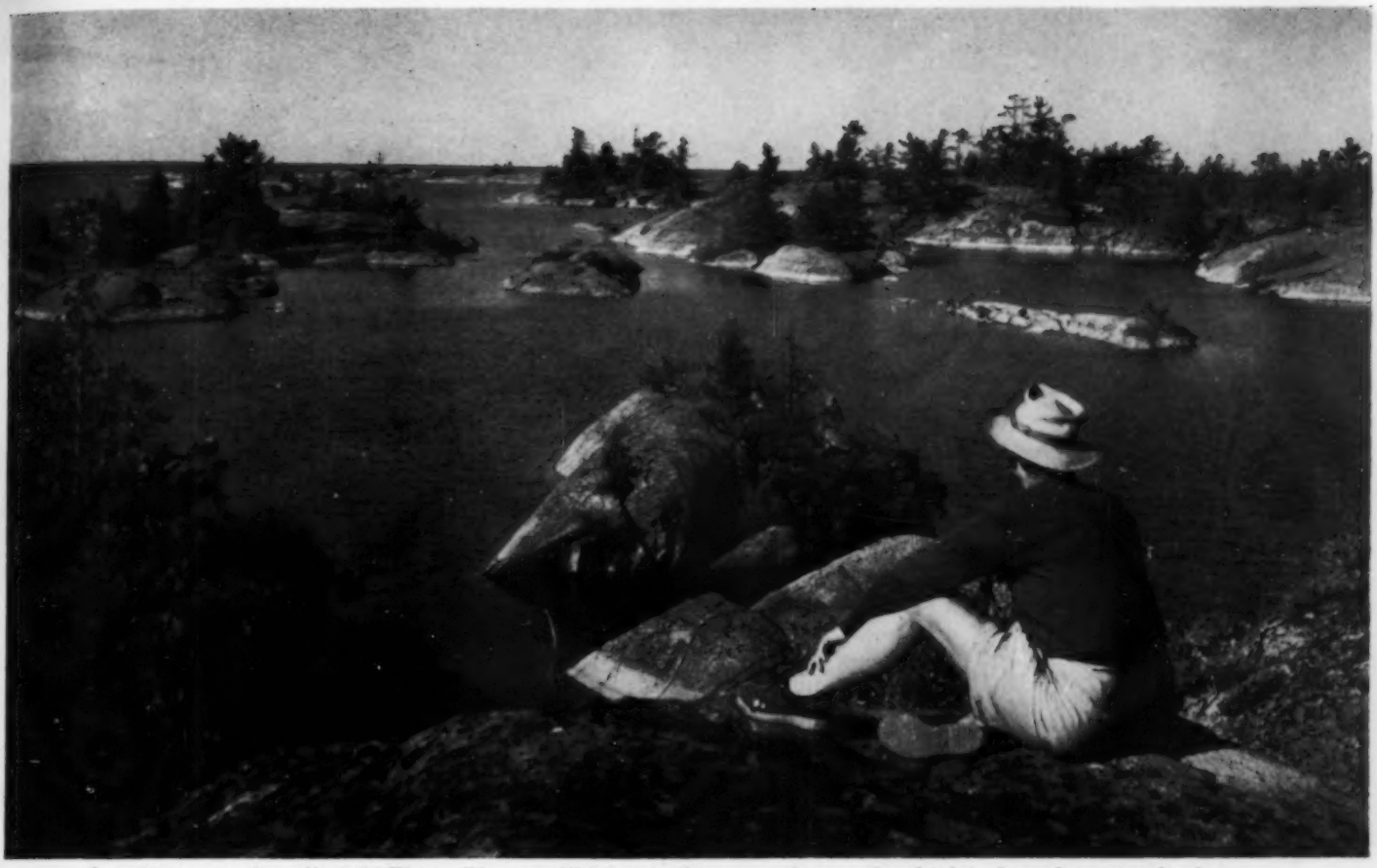
The islands are as varied as the people in a crowd. They range in size all the way from tiny outcroppings of a third of an acre to big Parry Island of 18,481 acres, which bottles up the harbour of Parry Sound like a giant, pine-clad cork. They include the lush little islands of Honey Harbour, Everyman's summer cottage resort, to the long, craggy streamers of the Bad River area plunging their knife-edged shorelines down into the chilly and fish-filled depths. Among them are an obscure "Hen" island—and her charming brood, "The Chickens", a covey of thumb-sized, uninhabited islands, each wearing a tuft of pine like the top knot of an Indian. And, set in the midst of the whole chain—although not officially *of* them—is the largest freshwater island in the world, Manitoulin.

In some places, the Bay's ragged, inner shoreline is so thickly strewn with islands that it is a good morning's trip from the mainland to their outer fringe. In other places, the shoreline presents a mile or more of bare, Precambrian mainland rock to the elements. Here, some of the original surveyors' stakes still stand, erected by the first men sent out by the Ontario Government and the Department of Indian Affairs.

To protect freighters and small boats that sail in the treacherous shoal-filled waters, small lighthouses are dotted among the islands. Typical is this one, near Pointe au Baril.



Islands are often strewn so thickly along the Bay's coast that it is difficult to distinguish them from mainland. A view west from the mainland toward a solid line of islands south of Parry Island.



In addition to the official "Thirty Thousand" Islands there are thousands of islets less than one-third of an acre in size like those shown in the above view of the Bad River area.

Because of the varying levels of the Georgian Bay from year to year, surveying, mapping and even island-counting have not always been easy. Aerial photographs do not always distinguish between islands at low water mark—and high water frequently cuts large islands in two. The Department of Lands and Forests maintains that its "Thirty Thousand" is a reliable estimate—not counting anything under a third of an acre in size—but local offices more than triple the total—and expand the definition of "island"!

In and out of the water, this is a country of rocks laid bare. It is easy for even the most casual observer to imagine a world in formation . . . the molten flow of lava, "frozen" today in solid rock . . . the cooling and solidifying . . . the retreating glaciers that left their long scars on the land . . . finally the erosion, and the signature of millions of waves endlessly breaking, millions of ice floes grinding against the naked shore.

From Waubaushene north, the exposed rocks along the eastern rim of Georgian Bay and out on the islands are all Precambrian in age—granites, gneisses and schists, most of which have been intruded by pegmatite dykes. (The dykes consist primarily of feldspar and quartz, usually lighter in colour than the surrounding rocks.) Across the Bay on the western shore, the rocks are all younger sediments of Palaeozoic age, containing fossils of many types. Near the highways around Collingwood, these fossils are so common that sometimes they can be gathered by the simple procedure of getting out of the car and picking them up.

On the eastern shoreline, however, scientists have made their most exciting discoveries in the buried traces of life gone by. One of Ontario's greatest archaeological discoveries was made at the southern tip of the Thirty Thousand Islands—the site of old Fort Ste. Marie I, the headquarters for the Jesuit work in Huronia.

After the rocks and the water of Georgian Bay, the third basic element is the pine—the wonderfully picturesque wind-harried pine that looks like a reprint from Tom Thomson's "West Wind", the most widely-known painting Canada has produced.

The flora of the islands is very hardy. Like this wild strawberry plant, flowers, shrubs and trees find toeholds among the rocks and grow lustily in narrow, soil-filled crevasses.

The wild iris thrives in many parts of the Georgian Bay district, rivalling in beauty and size the cultivated varieties. Solid beds of the blue-purple blooms are often found.

Rushing across the breadth of Lake Huron, through the wide gap left by the Bruce Peninsula and the southern tip of Manitoulin Island, the west wind hurls itself against the islands with a steady force that turns the branches of the pines toward the east and stretches them out like threshing arms. Remaining the property of the government even when an island is sold, the pines are a tenacious lot, often appearing to grow from solid rock. Hemlock, tamarack, spruce, and balsam also are Thirty Thousand Island trees, with cedars replacing the pines on the outer and most wind-swept islands. In fall, the sombre evergreens are relieved with flashes of yellow and red as the deciduous trees — maple, oak, birch, poplar — turn colour.

Like the trees, the island wild flowers must find a toehold among the rocks — the pink corydalis with its feathery blue-green leaves, columbine, blue toadflax, and harebells. In pockets of virgin woods that sometimes grow up in the gullies, springtime produces an exciting abundance of trilliums, violets, partridge berries, moccasin flowers and delicate little pipsissewa (prince's pines). In the water are white water lilies, yellow pond lilies, pickerel weed, and on the hillsides grow carpets of blueberries which the Indians pick for sale and the cottagers pick for pies.

Warblers come north to nest all through the islands — as does the northern loon. Ducks bring in hunters in fall; bass, pickerel and maskinonge bring fishermen in summer. Summer populations soar and in the Parry Sound area alone the summer influx amounts to 50,000 people.

The first large-scale fish sanctuary scheme in the province was established among the islands, and a chain of reserves was set up to help restore the numbers of the dwindling small-mouthed black bass. From the original one at Pointe au Baril, others were added at Sans Souci, the French River, Fox Island and other spots. At Sandy Island, a model 1000-acre sanctuary has given the biologists of the Fisheries Division a unique chance to study the habits of the bass. One important finding from the tagging experiments indicates that the bass probably do not migrate during their lifetime as

do some fish, but stay relatively close to their spawning grounds.

Commercial fishing, important in the Georgian Bay for the catches of lake trout, whitefish and similar fish, lies in the deeper water beyond the chain of islands.

Inside the fringe of islands today, cruise speedboats, outboard-motor craft, launches, the odd pleasure canoe — and one Fairmile that recently replaced the old *Midland City* which for years huffed and puffed and creaked its way between Midland and Parry Sound. Outside the fringe — well beyond the shoals and reefs — Great Lakes freighters steam up and down from the lakehead in the season of navigation and hole up, a dozen at a time, in Bay harbours when the ice creeps over the lake.

In the early days of the islands, the only craft abroad was the canoe of the Indian, of the *coureur-de-bois* and, eventually, of Champlain.

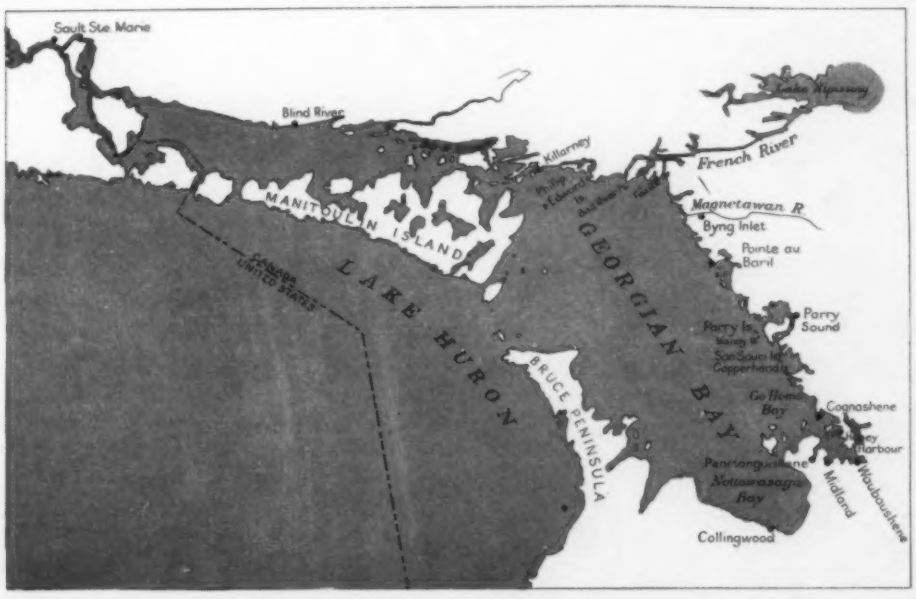
Champlain, that visionary Frenchman, for some time entertained the idea of sending some of his young men into the wilds to live with the Indians and learn their customs. He found a perfect emissary in young, adventurous Etienne Brulé, whom he sent among the Algonquins and Hurons in 1610.

Because they considered him an atrociously bad example to the Indians, the Jesuits, major chroniclers of the age, ignored his very existence as thoroughly as possible. Since Brulé himself kept no records, history relates little of the year that the young Frenchman spent with the Indians.

He undoubtedly paddled up the Ottawa River with them — first white man to pass that way. He also must have travelled the Mattawa River into Lake Nipissing, and on down the French River into Georgian Bay. There, paddling southward toward Huronia, he became the first white man to see the Thirty Thousand Islands.

Five years later, he acted as guide-interpreter for Champlain on his voyage of 1615. With them, according to Champlain's journal, went ten Indians and two canoes "loaded to capacity". For fifteen years, Champlain had

Once a fairly common sight in summer, the deer now is rarely seen till fall among the islands.



been contemplating the trip through "Lake Attigouautan" and, when he stood for the first time on its shores, looking out on the shining expanse of one of the biggest bodies of fresh water in the world, it should have been a supreme moment for him. But, strangely, his attention was directed instead to a fine crop of squashes and the native dress of about 300 Indians, whom he called the *Cheveux Relevés* (for their high brushed-up hair) but who later were better known as the Ottawas. His 120-mile trip south to Penetanguishene, through the chain of islands, he disposed of with a brief and grumpy paragraph in an otherwise voluminous journal.

"The next day" wrote Champlain, on leaving the French River and the Indians camped there, "we parted, and continued our journey along the shore of this Lake of the Attigouautans, in which there are a great number of islands; and we made about forty-five leagues, keeping along the shore of this lake. It is very large, being nearly four hundred leagues in length from East to West, and fifty leagues wide, and in view of its great size, I named it the Freshwater Sea. It abounds in many kinds of excellent fish, both those we have and those we have not, and principally in trout which are of enormous size; we have seen some that are as much as four and a half feet long, and the smallest one sees are two and a half feet in length. Also pike of like size, and a certain kind of sturgeon, a large fish and marvellously good to eat.

"The country bordering upon this lake along the North shore is partly rugged and partly flat, uninhabited by savages and slightly covered with trees including oaks. Then afterwards, we crossed a bay (Matchedash Bay) which forms one of the extremities of the lake, and made some seven leagues until we reached the country of the Attigouautan, and came on the first of August to a village called Otoüacha. . ."

After describing this new country which was more to his taste, Champlain added as a last stab at the islands: "This district seemed to me very pleasant in contrast with such bad country as that through which we had just come . . ."

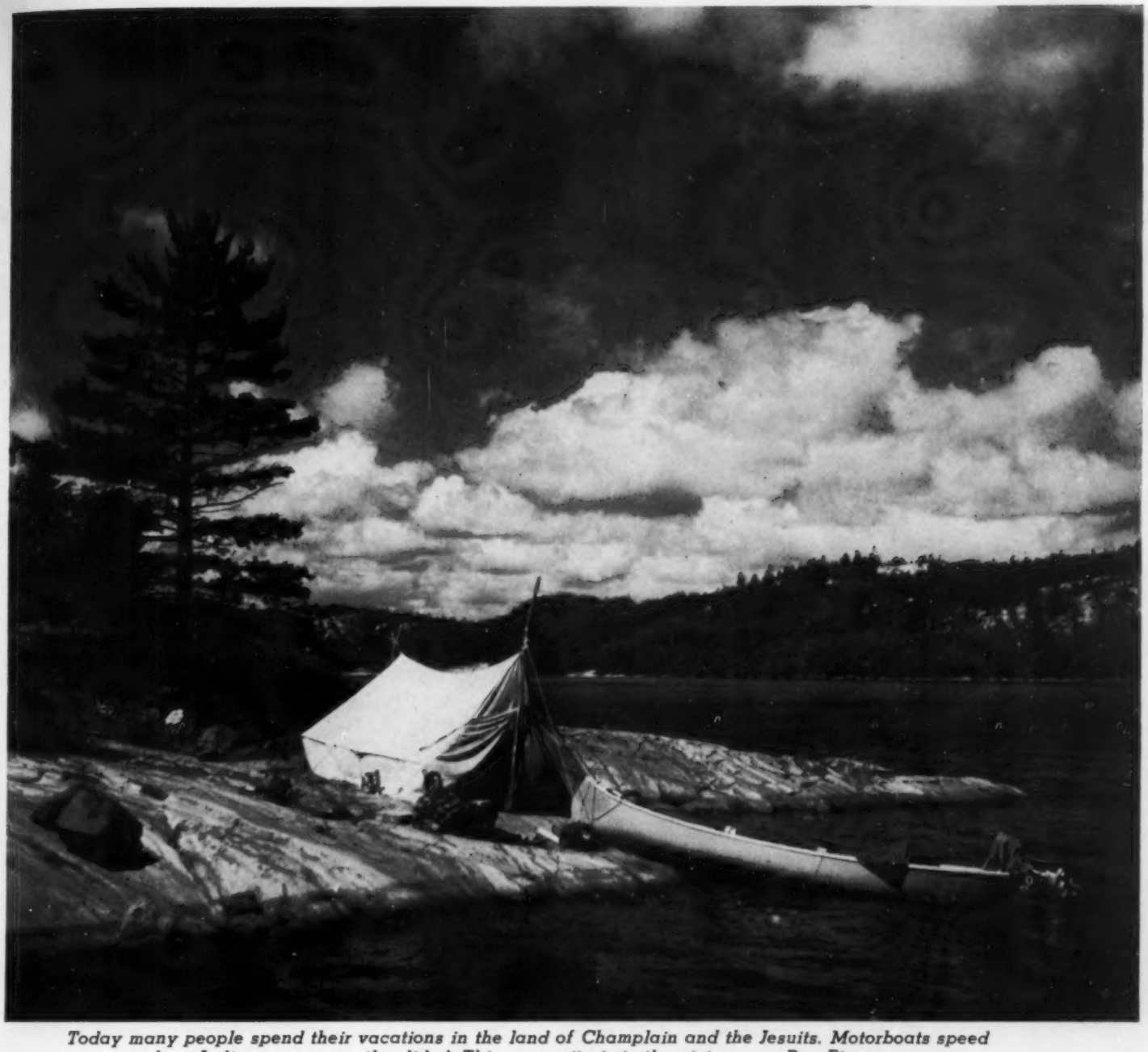
From Otoüacha, which was near the present site of Penetanguishene, Champlain went on to Cahiagué, probably near the present Hawkestone. On 1 September, he set out for home.

Although Champlain failed dismally to appreciate the beauty and the resources of the Thirty Thousand Islands, they were to come into their own several centuries later when the squash-raising Indians of the French River had been long forgotten. The Georgian Bay Association, founded in 1916, helped open up the area for the holidaying Canadian by deepening channels of the "Inside Passage", marking channels for small boats and banding together the cottagers. In 1948, assisted by the Ontario government, the Association erected the first three of its monuments to mark the course taken by Champlain. After the natural stone markers had been completed at Pointe au Baril, Honey Harbour, and Sans Souci, the Association began work on others at Cognashene, the French River, and the junction of the French and the Trans-Canada Highway. On the Champlain monuments are simple plaques bearing a quotation from the explorer's own journal: "As for me, I labour always to prepare a way for those willing after me to follow it."

Many have followed the way prepared by Champlain — from early fur-traders to present-day cottagers. As Upper Canada settled down into provincehood, cities grew and the population became, to a large extent, wheel-borne. After spreading out into Haliburton, the Muskoka Lakes and the fairly accessible Thousand Islands of the St. Lawrence River, the holiday visitors and cottagers spread, finally, to the less accessible Georgian Bay region. But the present and the past still blend among the islands in the names inscribed on the maps.

"Pointe au Baril", today one of the smart summer resorts of Ontario, was probably named in the fur trading days of the French regime when the "point" was marked by a "barrel" used as a buoy.

"Penetanguishene", oldest historic spot in Canada west of Quebec City, is Indian for "place of the white, rolling sands". And Champlain's Lake Attigouautan has split into Lake Huron and the Georgian Bay, the



Today many people spend their vacations in the land of Champlain and the Jesuits. Motorboats speed where Indian canoes gently glided. This camp site is in the picturesque Bay Finn area.

latter renamed in honour of King George III.

"Parry Sound", now a tourist centre, owes its name to Sir William Parry, the Arctic explorer; "Byng Inlet" north of the Magnetawan River, to Viscount Byng, Governor General of Canada from 1921 to 1926.

At the beginning of the twentieth century, members of the staff of the University of Toronto founded a unique colony of their own among the islands — "Go Home Bay", twenty-one miles north of Midland, and so exclusive that residents must be voted upon before being allowed admission.

During the summer, the islands have a population counted in the thousands. But, once the snow flies and the fleet of freighters is frozen in the ice of Midland harbour, there are only a few all-year-round residents to scoot back and forth in snowmobiles, a few rabbits to leave their tracks in the snow of deserted islands. From Sault Ste. Marie to Huronia, the islands snooze under a Christmas card whiteness, as remote as in the days when Indian paddlers guided their canoes through the Inside Passage, and Champlain built his campfires on the shore of Lake Attigouautan.

Mersey Paper Company Ltd., Liverpool

A newsprint mill at Brooklyn, Queens County, Nova Scotia.

Forestry in Nova Scotia

by LLOYD S. HAWBOLDT

Introduction

IF THE ORIGINAL land settlers and their early uses and abuses of the forests are considered, Nova Scotia has had as long a history of conscious and unconscious forestry as any part of North America. It is therefore of special interest that forestry continues to be a primary industry. This can be attributed in part to a favourable maritime climate, which is conducive to natural regeneration of forest land following cutting.

Considering the forested area of Nova Scotia and a cutting history of well over two hundred years, an annual yield of forest products equivalent to about 500 million feet board measure suggests sound forest management methods in the past. In actual fact, many of the early settlers and their descendants did maintain good stands of timber. Since the Second World War some of these magnificent stands, managed for generations and looked upon with pride by former owners, have been sacrificed.

During the years of early settlement forestry activities centred around land clearance and the building of shelter. Aside from this, the earliest major use for timber was in wooden shipbuilding. This industry which had a great influence on forestry in Nova Scotia, made the province one of the busiest and wealthiest in Canada.

Shipbuilding is said to have started at Yarmouth in 1763. Between 1840 and 1880 the industry was at its peak in Nova Scotia, but by 1880 wooden sailing ships were losing the world trade routes to iron hulls and steam.

At the time of the American Revolution and the Napoleonic Wars there was a flourishing export trade to Britain in pine masts, hewn pine and oak for the Royal Naval Stores. It is recorded that fifty vessels loaded ship timbers for Britain at Pictou as early as 1803. Other ports were also busy with this trade.

Following the shipbuilding period Nova Scotia forestry interests were left with the more prosaic uses of timber. In the intervening time to the present, many small wood-using industries have developed to accompany the demands for sawn lumber. Although pulpwood has been exported from the Province since 1900, it is within the last thirty years that the influence of pulpwood harvesting has been felt in forestry practices.

Within this present period, probably the greatest impact on forestry in Nova Scotia was made by the Second World War. The demand for lumber was increased greatly and many felt that future sawlog material was in danger of depletion. As a consequence the industry requested the "Nova Scotia Small Tree Conservation Act". This Act in turn has altered the course of forestry in the Province.

The forests of Nova Scotia have been and continue to be of great economic and aesthetic value to its people. The Department of Lands and Forests, with the co-operation of the forest industry and the people of Nova Scotia, endeavours to protect and conserve these values through its various activities. Assisting in the duties of the Department is an organization of personnel which has expanded greatly within the past ten years. At present the Province employs twenty technically trained foresters, a wildlife biologist, a forest entomologist, as well as a large staff of surveyors, rangers and others.

Through educational programs the Department* brings to the people an appreciation of the values of forestry. Through its protection service it attempts to reduce the losses from fires. Through its field staff it encourages better forestry practices and fosters the ideals of conservation and continual yields of all the products of the forest.

The Forests of Nova Scotia

Nova Scotia has a total area of nearly 13½ million acres of which roughly 10 million acres are classed as forested. Only one-quarter of the woodland is held as Crown Land by the Province of Nova Scotia. Nearly one-third is owned

* Throughout the article, Department refers to the Nova Scotia Department of Lands and Forests.

by farmers in the form of some 30,000 woodlots. Almost another one-third is in holdings of more than 1,000 acres each, under ownership of about 200 companies and individual landowners. About one-thirtieth, in the form of National Parks and Indian Reserves, is under the control of the Government of Canada. The balance consists of small private woodlots.

The Province extends about four hundred miles southwest to northeast. With the influence of the Labrador Ocean Current on the northeastern regions, and that of the Gulf Stream on the southwestern areas, this southwest-northeast orientation makes for variation in tree distribution, growing conditions, and forest types.

In the northeastern part of Cape Breton Island, there is an area of high plateau, where much balsam fir and white birch are found along with quantities of black spruce, mountain ash and poplar. Aside from the plateau, the forest cover of Cape Breton Island is balsam fir, white spruce, and mixed hardwoods. Scattered white pine, red spruce, and hemlock may be found, and old stumps indicate that these were more abundant at one time. Abandoned farmland on the highlands is commonly stocked with balsam fir, while similar lands on the lower slopes and in the valleys are forested with white spruce of the old field type. Occasionally red oak, elm, and white ash occur in sheltered valleys, such as Pleasant Bay.

The southwesterly portions of the mainland are characterized by some of the finest stands of white pine, hemlock, and red spruce to be found in Eastern Canada. Hardwood areas consist mainly of white birch, red oak, poplar, and red maple. Northeasterly, hemlock decreases as does white pine, while red spruce is most prominent in softwood stands. The hardwoods likewise undergo a change, with yellow birch and sugar maple types becoming more frequent.

The North and South Mountains of the Annapolis Valley region bear a great deal of white spruce and balsam fir on old farmland. Slopes toward the Valley are forested commonly with red spruce, white and red pine and hardwoods, consisting of yellow birch and sugar maple, some red oak and some beech.

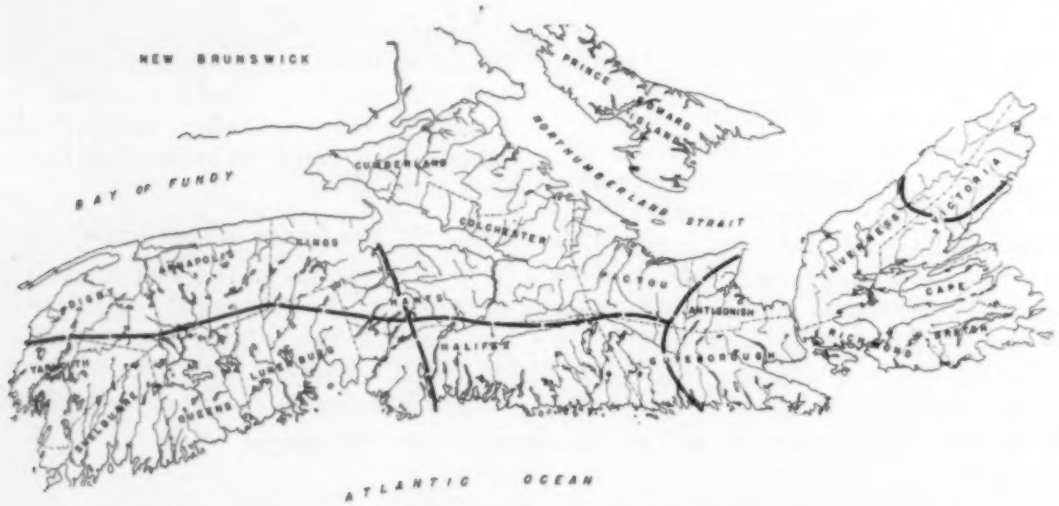
The Cobequid hills and their extensions into Pictou, Antigonish, and Guysborough Counties are covered with mixtures of yellow birch, sugar maple, some beech, red spruce, hemlock, and balsam fir.

The lowlands of Antigonish and Guysborough Counties are characterized by old field white spruce and balsam fir. Swamps of black spruce, larch, and red maple occur commonly in low areas of Guysborough.

While some of Nova Scotia's barrens are regarded as natural, most are the result of fires. The Province is not without its share of swamp areas, which support black spruce, larch, balsam fir, white pine, and red maple of varying degrees of quality.

The Forest Industry

Directly or indirectly the economy of all the people of Nova Scotia is dependent on the forests and their products. During the past three years the average annual yield of such



N.S. Department of Lands and Forests map, showing generalized forest regions.

Old growth hemlock near Jordan Lake, Shelburne County. G. D. Dwyer

products, exclusive of fuelwood, has been equivalent to 535 million feet board measure. The bulk of this production, about 310 million feet, has been softwood lumber. Somewhat more than the equivalent of 135 million feet have gone into pulpwood, and about 40 million feet for mining timbers.

A small army of men cut and bring this wood from the forests. The employees of almost 800 sawmills convert the logs into lumber. Hundreds of persons are employed to process the pulpwood sticks into paper and pulp products in the one paper mill and the three pulp mills located in this Province. The mining timbers are essential to a large portion of the coal-mining industry.

Although these use the bulk of the forest product, there are a great many other wood-using industries in Nova Scotia, including the boatbuilding plants, furniture factories, box and crate manufacturers, and cooperages. Other woodenware industries produce quantities of small articles such as implement handles, oars, clothes pegs, and berry boxes.

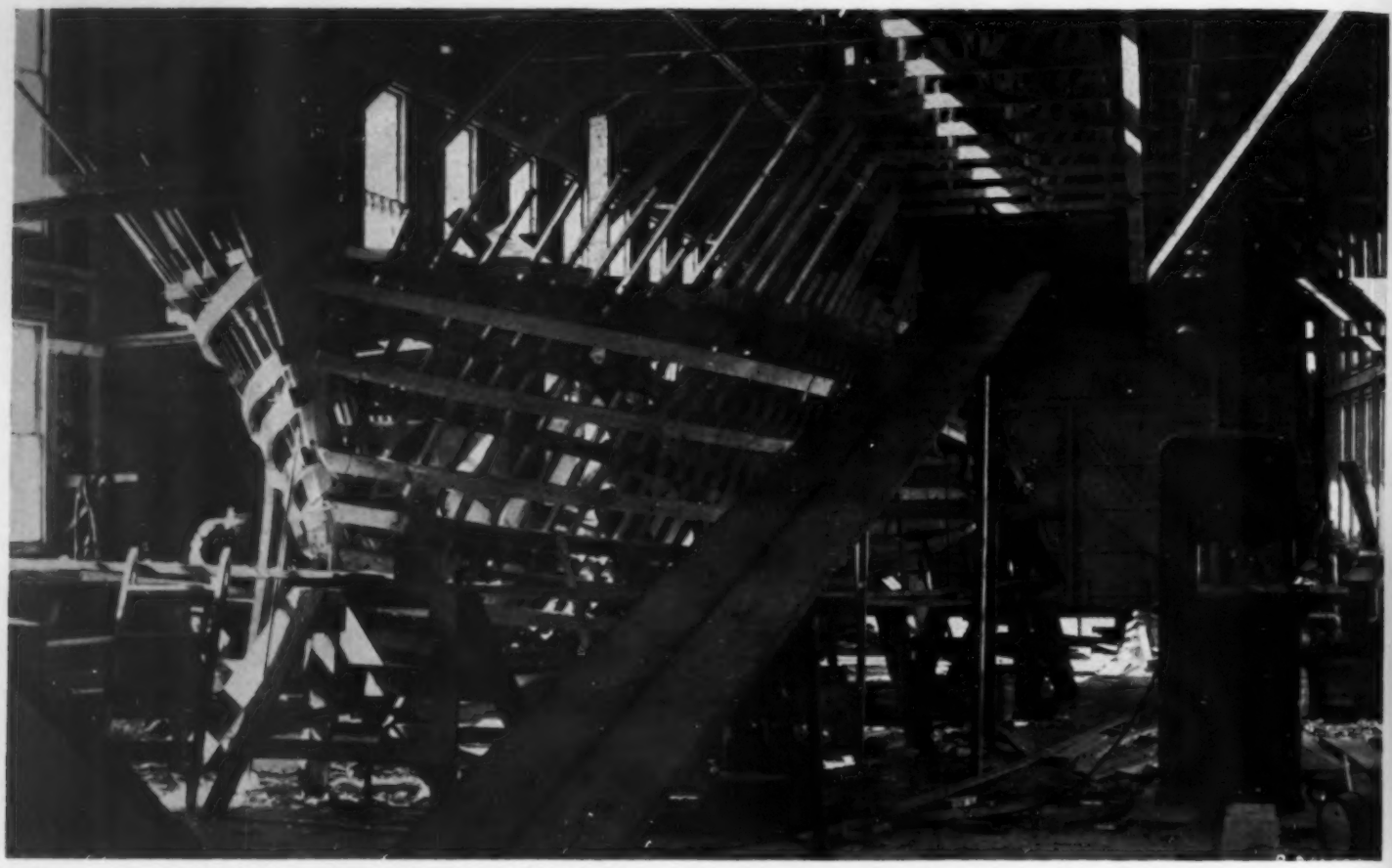
Valuable products from the forests also include the 2½ million Christmas trees exported annually over the past six years, the maple sugar and syrup processed every spring, about 3 million pounds of meat yielded from a yearly average of more than 35,000 deer taken within recent years, and nearly 165,000 fur pelts which are exported annually.

These forest products have a total basic value of about $50,000,000 per year to the people of Nova Scotia. The major portion of this value is in lumber and allied products, pulpwood, pulp and paper. Fuelwood, Christmas trees, game and fur between them have a value of about $7,000,000 annually.

The role played by forests in water conservation for agricultural use, for the development of hydro-electric power, and for water supplies to towns and cities is beyond evaluation. Nor is it possible to calculate the recreational values provided by the woodlands.

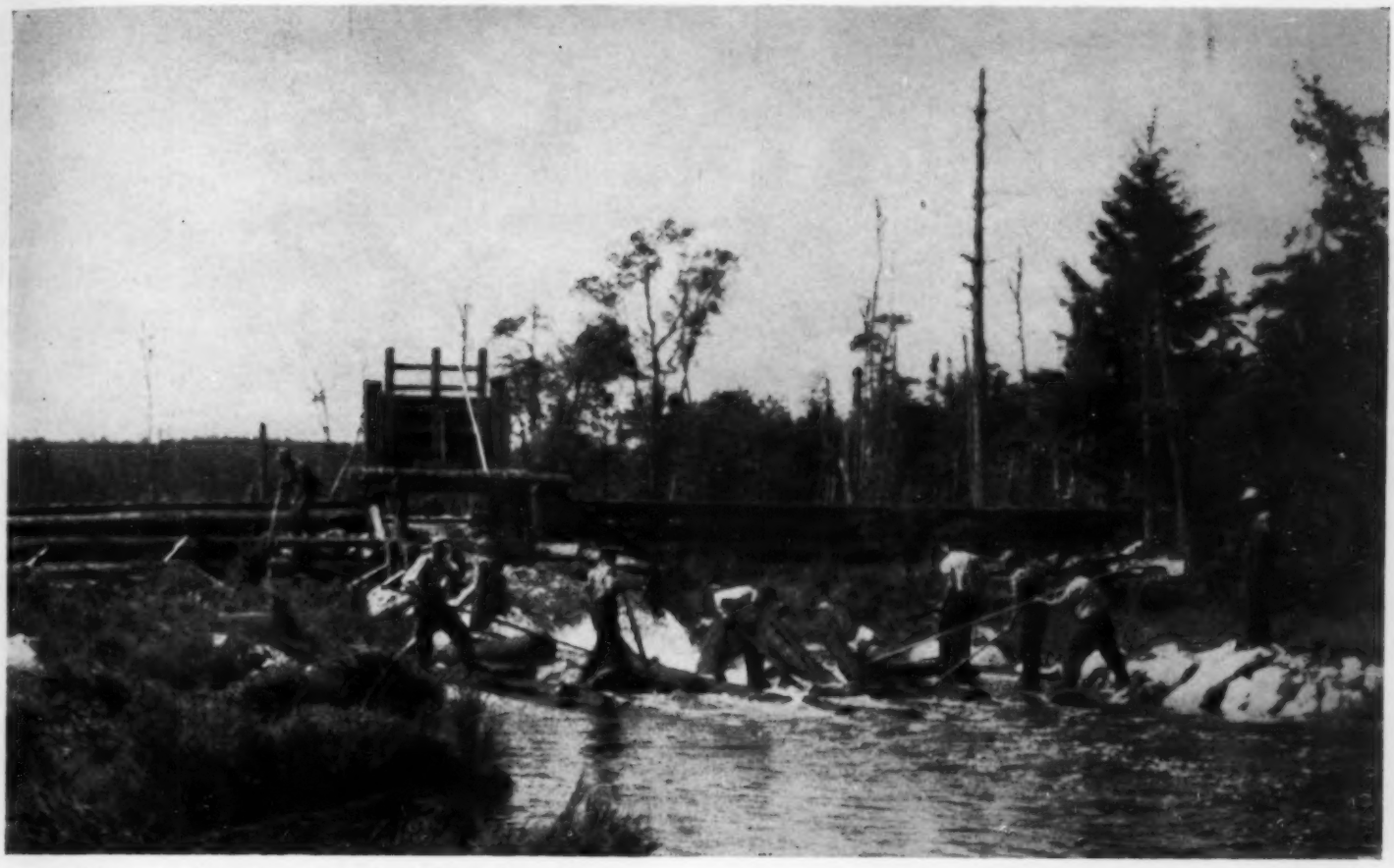
Forest Protection

The material and aesthetic values of the forest are threatened constantly by enemies.



A 50-foot cabin cruiser being built in the yards where the famous Bluenose *was launched at Lunenburg.*

A stationary sawmill — lumber destined for the United Kingdom.



The last of the log drive, East River, Lunenburg County.

Man himself has proved to be perhaps the worst of these enemies. Aside from the tremendous waste in cutting methods and utilization, he has been responsible for about 85 per cent of the forest fires which have destroyed so much forest growth.

Between them, smokers and fishermen set about one-third of all forest fires. Another one-third result from the burning of brush, and carelessness among berry pickers, children, campers and travellers. Although more closely associated with the woods, sawmills and woods labour account for only about two per cent of the forest fires. Within the past eight years there have been 266 fires annually with a yearly average of 12,144 acres burnt. The costs for fire-fighting, and the damages, have amounted to almost $150,000 annually.

At present there are seventeen towers operated by the Department, five by private companies and two by the Government of Canada. An aerial patrol service supplements these towers for fire detection. The Department also maintains stand-by crews of fire-fighters in

Conveyor carrying pulpwood sticks to a block pile for storage.

Baling Christmas trees near Goshen, Guysborough County. G. D. Dwyer

Cumberland, Hants, and Pictou Counties in addition to the regular fire ranger establishments in each county of the Province.

Fire-fighting equipment is distributed among rangers throughout Nova Scotia. This equipment presently includes about 300 motor pumps, over 4,500 back pumps, about 680,000 feet of hose, and quantities of pails, grub hoes, axes, and shovels. There is also a fleet of jeeps and trucks and several bulldozers. The me-

Maple sap is boiled down at the sugar house to yield syrup, sugar and cream.

Collecting maple sap. It takes forty gallons of sap to produce one gallon of maple syrup.

chanical headquarters for repairs and maintenance is at Shubenacadie, where there is also a depot of emergency supplies which can be rushed to any unusual fire situation overtaxing the normal local supplies. Radio contact between ground, aircraft, and automobile stations provides an efficient relay during fire season.

The seriousness of forest fires cannot be over-emphasized. They destroy valuable wood-

A typical small wood-using industry produces pails with locally developed machinery.

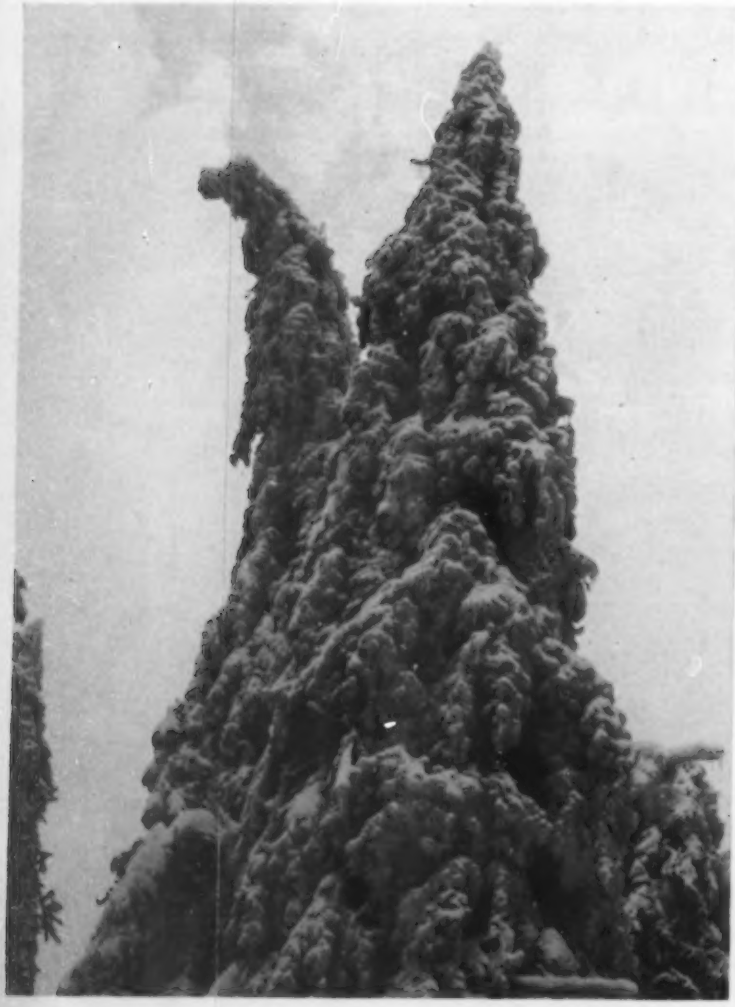
The farmer's team and small boy await his return from a brush fire.

The background stand of 65-year-old white spruce budworm, while the 35-year-old stand in the fo

land and the local economy of communities. Wildlife is destroyed. Watersheds are seriously damaged. The land is eroded and made barren. Anyone using the woods who is careless with fire is a contributor to this destruction of life, beauty, timber, land and the livelihood of their fellowmen.

Although fire is the most spectacular enemy of the forest, there is a group of enemies which in its own quiet manner destroys enormous amounts of wood. This group includes the insects and diseases. Much of this destruction is a natural harvesting. Nature provided the insects and fungi to break down the old and over-mature trees. They help in the process of rotting the wood and returning it to the soil, thus replenishing the land for a new crop.

Many of the insect and disease epidemics are related to the age, vigour and sanitary conditions of the forest. Hence protection against this group of "enemies" of the woodland is dependent more on preventive measures than on purely mechanical control methods. It has been said that "wise use of the axe" would result in fewer epidemics. Insect and disease pests are considered as problems of forest management in relation to natural control and prevention.



Rarely does ice accumulate so heavily from glaze storms in Nova Scotia. Much breakage results.

Reforestation

Countries the world over have experienced the destruction of forests by fire and wanton cutting with the resultant barren and desert areas. Even the new world has acquired its dust-bowls following the removal of forest growth from the watersheds. Reforestation has corrected some of these mistakes, and as a consequence the subject holds great public interest.

The wild land of Nova Scotia is perhaps unique in its ability to regenerate following severe cutting, wind destruction, and sometimes even the burning of forest cover. Undoubtedly this favourable natural reforestation can be attributed largely to the climate. Also the notoriously acid condition of the soils of this Province is conducive to softwood reproduction. Unless agriculture's watchword "For

spruce was severely damaged by spruce the foreground was practically untouched.

Hurricane "Edna" (1954) blew down a great deal of timber.

the land's sake use lime" is followed, softwood forest soon invades old farmland.

Reforestation has been a part of the program of the Department of Lands and Forests since 1926, when a Provincial Forest Nursery was authorized by Order-in-Council. A small nursery has been maintained at Lawrencetown ever since. Now, there are also transplant nurseries in Yarmouth, Cumberland, and Pictou Counties.

In 1927 the first seedlings, a total of 138,000, were made available for transplanting throughout the Province. Since then the Department has distributed almost six million trees for reforestation projects on private and Crown lands. The present objective in production is for one million trees annually.

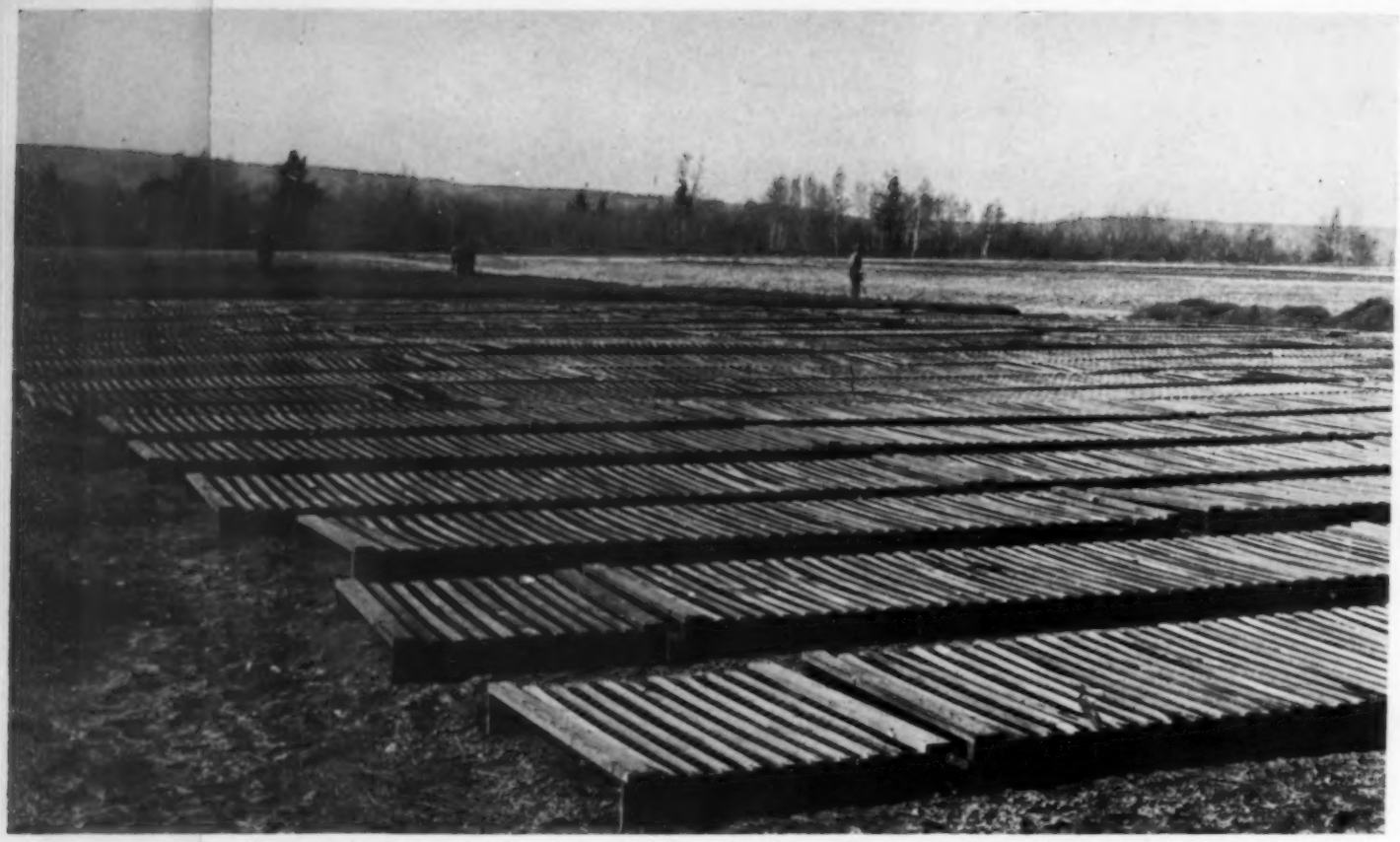
Forest Management

Throughout the history of logging in Nova Scotia selective forms of cutting were prominent. The shipbuilding industry with its special demands had a great influence on forestry practices, and cutting methods were a consequence of selection for boat timbers. Woodlot owners learnt to recognize masts, knees, keels and planking in individual trees. Hence forests were lightly cut for these high-priced timbers. This acquired practice of selective logging, especially on farm woodlots, has continued for many years.

The history of logging is by no means entirely one of care. Hence, timber famines have been predicted for Nova Scotia since at least the middle 1800s. In more recent years the industry foresaw a scarcity of sizable sawlog material, and in 1946 "The Nova Scotia Small Tree Conservation Act" was made effective.

Briefly this "Small Tree Act" states that on operations of 50 thousand or more feet board measure, or the equivalent, spruce, pine, or hemlock of less than ten inches inside the bark at a point not less than one foot from the ground may not be cut without a licence to do

Spruce and fir taking over abandoned farmland.



Seed beds at the Provincial Forest Nursery, Lawrencetown. The "crates" provide shade for the seedlings.

so from the Minister of Lands and Forests.

This Act has made a great impact on forestry in Nova Scotia. Despite the many problems it has posed, the indirect results and benefits have been tremendous. As a consequence of closer contacts, open and frank discussions of mutual problems, industry and the Department have been able to exchange opinions, for the benefit of good forestry. At no time in local forest history has there been such a general consciousness of forest management.

In any consideration of forest management in Nova Scotia it is fitting to pay tribute to those families who have maintained well-managed farm woodlots for several generations. Through the careful type of logging practised, such woodlots have been a steady source of income to many farm families. Each winter the farmer went to the woodlot to cut dying and dead trees, crooked or otherwise defective trees, and to pick up any windfalls. These men often had a keen eye for prudent thinning so as to give to individual trees the best opportunity for development. When large mature trees were cut their smaller neighbours were released for faster growth. It is interesting to read in the ring patterns of stumps this history of released growth, resulting from the discreet cutting by three generations of a family.

One such farm woodlot in Lunenburg county consisting of 150 acres has been in the same family for more than three generations. The present owners cannot furnish details beyond the grandfather, who was born around 1833. Thus this woodlot has been maintained for at least 100 years. The grandparent cut somewhat more heavily than did the other two generations. It is recalled that his heaviest winter's cut was 40,000 feet board measure. Over the past 100 years the present owners believe the average annual cut would have been about 25,000 feet. In the earlier years much of the lumber went to the shipyards. In recent years the logs have gone chiefly for lumber and shingles. Small material from tops, thinnings and crooked stems has been sold for pulpwood.

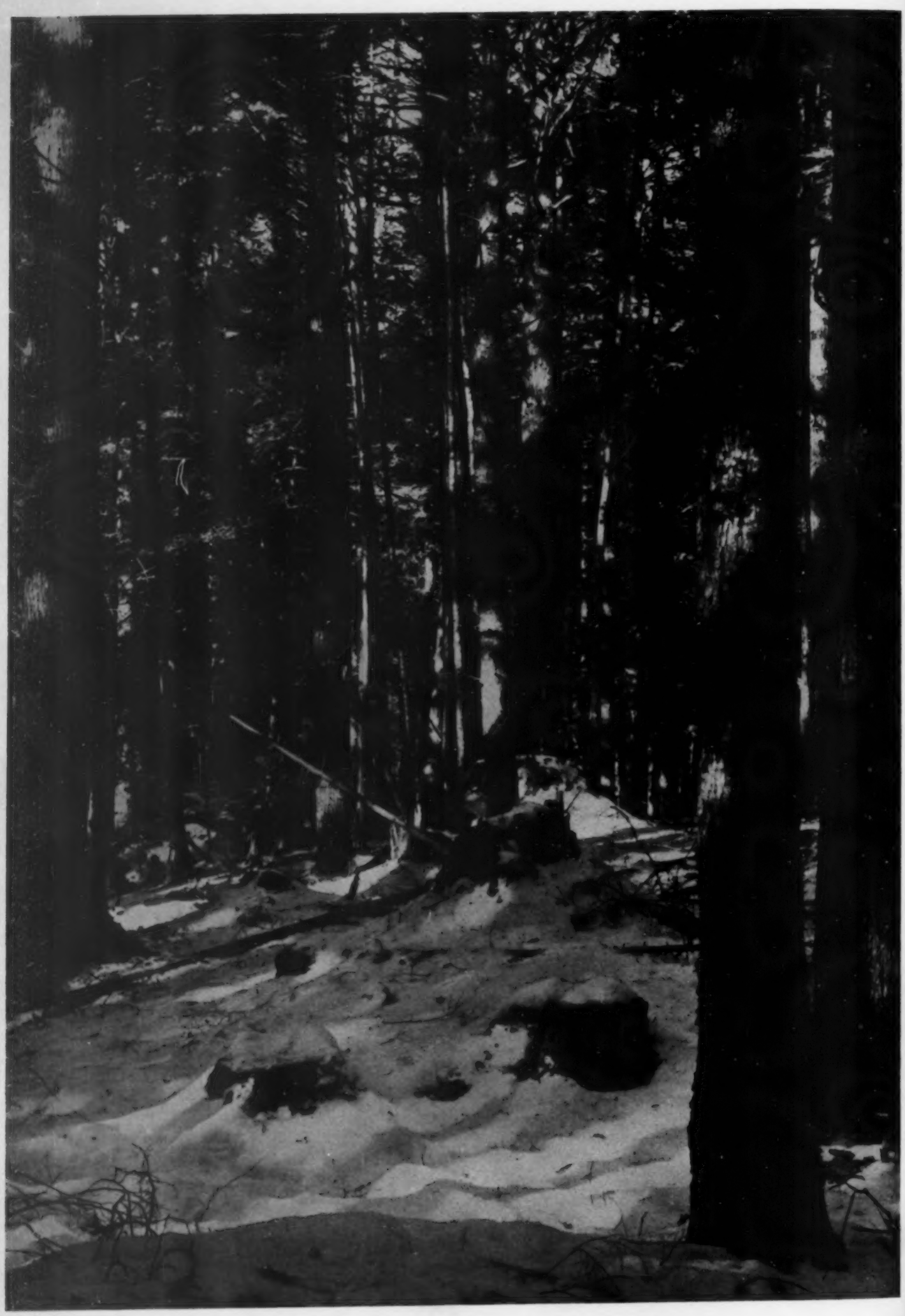
At present the woodlot is well stocked and is park-like in many places. Tall large trees of hemlock, red spruce, and white pine, well mixed with the younger trees, present a picture which is becoming more rare as time passes. One 50-acre part of the lot contains 800,000 feet of lumber, that is 16,000 feet per

Young trees, baled for shipment throughout the province, for reforestation projects.

acre. Although the remainder is not so heavily wooded, the farmer believes that the entire woodlot would have between 10,000 and 15,000 feet per acre. After more than 100 years of cutting during which time about 2½ million feet were removed from the stand, there still remain almost 2 million feet.

The management of forests whether in the form of farm woodlots or larger holdings is facilitated by an inventory. The Department of

Boy Scout tree-planting project on the Halifax watershed.



Lands and Forests is presently engaged in taking a forest inventory of the Province. The aerial photography and ground cruising is being done under contract. During the summer of 1953 Cape Breton Island was photographed and the cruising was carried out in 1954. Also during the summer of 1954 the northeastern half of the mainland of Nova Scotia was photographed and this area will be cruised in 1955. It is expected that the forest inventory will be completed by early 1957. When this information is available it will mean a great deal to the industry. There will be a complete set of maps showing forest types. The areas of productive and non-productive land will be known better than at present. Information on volumes of wood and size of material will be available as well as other helpful facts.

Crown Lands

In early years Crown Lands were granted to encourage settlement of the country. These Lands were becoming alienated at such a rate that about 1900 the Lease Act was passed. Under this Act twenty-year leases were issued which permitted the cutting of timber, in most cases, over 10 inches in diameter. Payments on leases varied from 40 cents to $1.50 per acre and some were renewable for an additional twenty years.

In recent years long term leases have not been issued on Crown timber land. Instead, when ready for harvesting the timber is sold by public tender, at which time cutting restrictions are advertised. At present only nine of the old leases are in force covering a total of about 438,000 acres. All but slightly more than 5,000 acres are in two large leases on Cape Breton Island. As well as not alienating Crown Lands, efforts have been made to raise the inventory of Crown Land. In the 1930s a fund was established to permit buying cut-over and burnt-over land for this purpose. Since then about 460,000 acres were purchased mostly for one dollar or less per acre.

Dr. Fernow in his report of 1910 stated: "The character of the Crown Lands places them largely in the class of barrens and semi-barrens". Time always being the healer, a great deal of this "scrub" land is now in various stages of production. Between one and two million dollars are distributed annually for employment and manufacturing timber cut from Crown Forests.

At present there are an estimated 2½ million acres of Crown Lands. Over 2 million acres have been surveyed and the boundaries set. Permanent roads are being built into large blocks of these areas for the purposes of management, harvesting and fire protection. Fire barren areas are being planted under an expanding program of reforestation.

The general policy of the Department is to bring Crown Lands back into production. These lands are of considerable value to the people of Nova Scotia now, and they may well become the most valuable future forest land in the Province.

Forest Research

Forest research in Nova Scotia is conducted by services of the Government of Canada, and the Nova Scotia Research Foundation. Several of the present investigations are being made at the request of the Department of Lands and Forests with a view to improving stand conditions and methods of cutting and processing so as to yield a better product and better returns as well as to ensure future yields.

Much of Nova Scotia's forest land is covered with poor quality hardwood which at this time has little or no value. Efforts are being made to determine what might be done to hasten the development of more valuable species on such lands.

The desertion of old farm lands has resulted in a great deal of old field white spruce. Generally this material is of inferior quality for sawlogs and it is not greatly desired for pulpwood. How these old field types should be managed to develop better quality softwoods is the subject of another silvicultural project.

A study is being made of production costs from the woods operations to the mill. The results are expected to reveal some of the hidden losses and to point the way to improvements which will yield greater returns for the product. Very closely related to this study is another which is directed toward efficiency in manufacturing the forest product with respect

At least three generations of one family have been cutting red spruce, white pine and hemlock from this stand in Lunenburg County. Old and new stumps may be seen.

Logs for the sawmill from a farm woodlot in Colchester County.

to methods and equipment. Both projects should provide valuable suggestions for the industry which would reduce waste in time, material, and money.

A number of investigations are under way dealing with various aspects of regeneration, forest classification, forest tree diseases and insects, and tree physiology. All these studies should add materially to a better understanding of how forests begin and develop, their requirements, and how to manage them so as to promote healthy vigorous stands for the generations to come.

Although the Department of Lands and Forests does not have a research program as such, frequently opportunities arise for personnel to conduct a certain amount of experimentation. By virtue of the variable nature of Nova Scotia forests the diameter limit cutting of the "Small Tree Act" presents many results. Observations on these results provide opportunities to profit in knowledge. Frequently alternative proposals are acceptable to the operators. Thus types within a stand may be cut according to other limits of diameter or by marked trees. Much can be and has been learnt from observations on such suggested cutting methods. Accepting the adage, "We learn by doing", this is an active period of schooling in forestry in Nova Scotia.

Wildlife

The benefits both in pleasure and value of the wildlife resources of the forests are not to be treated lightly. Likewise there are occasions when the destructiveness of wildlife is not to be treated lightly. The porcupine has made many enemies among mankind because it destroys so many young trees. The white-tailed deer is a beautiful animal to the traveller's eye and a delight to many hunters, but it is not welcomed to the farmers' gardens. Beaver are valued for their pelts and their role in water conservation. Their value decreases when they flood highways and railroads by building dams in culverts.

The nuisance value of wildlife generally is a result of local populations becoming too great. Realizing the problems involved in maintaining adequate but not troublesome populations of wildlife, the Department of Lands and Forests has employed a wildlife biologist.

Because of the wide interest in the moose "sickness" considerable study was made to determine the cause of the decline in this magnificent animal. Although no definite conclusions have been forthcoming as yet, sufficient was learned to cause concern for the deer herd.

The deer population of Nova Scotia developed from introductions made around 1900 and natural migrations. Since their establishment in the new environment they have become very numerous. Herein lies a distinct danger. The herd may become so large that congestion would result in reduced supplies of the proper foods. The effect would be loss of vigour in the herd and disease. Once disease enters a herd, its numbers are depleted rapidly and they return very slowly, if ever, as has been found elsewhere. This is illustrated by the present moose situation. Although there is relief from hunting pressure, the moose does not return. On the other hand, so long as a herd is healthy, over-harvesting would not eliminate it. A period of closed seasons would permit quick recovery from overshooting.

Despite the annual predictions that deer are becoming scarce in the Province the total take has been increasing steadily. This past season saw the largest harvest of any.

In order to manage any population of wildlife it is necessary to have certain records. A system of hunter returns has been instituted which provides information needed to maintain an annual check on the population trends. The objective is to ensure that there is always a healthy herd of a size which can be sustained on the land available. It is of interest to note that over 99 per cent of all licensed hunters of the past season have made their reports, a record which perhaps is unequalled anywhere.

Through the facilities associated with a Wildlife Park maintained at Shubenacadie several types of game birds are raised for establishment in the Province. These are propagated from locally bred stock so as to produce strains suitable to native conditions. Original introductions were made by sportsmen's organizations of the Province.

There are five game sanctuaries in Nova Scotia, four maintained by the Province and one, in the Highlands National Park, by the Government of Canada. For the present it would appear prudent to maintain them. Certainly they provide excellent experimental material, and it is difficult to foresee the role

Beaver dam with house in background at Welton Lake, Cumberland County. G. D. Dwyer

A two-and-half-year-old buck at the Wildlife Park, Shubenacadie.

such areas may play in the future. It is recalled that as late as about 1930 beaver were thought to be extinct in the Province, but some were found in the Tobeatic Sanctuary. By live-trapping and transplanting to other areas, over a period of years they were re-established to the extent that there have been seven open seasons in selected areas since 1943 and a total of some 35,000 pelts exported with a value of about $950,000.

This has proved to be a wise and worthwhile project in game management, which is maintained by the records available from trappers' declarations to the Department and by field observations. It is the desire of the Department to manage all wildlife resources in a like manner so as to provide the pleasures and material returns possible from well-balanced populations.

Extension

The Nova Scotia Department of Lands and Forests is a service Department. As such, efforts are directed largely toward familiarizing the people of the Province with those things pertaining to the forests. Each District Office, of which there are fourteen, takes part in the presentation of talks to local organizations. Motion pictures on forestry and wildlife subjects are shown at adult gatherings and in the schools.

A large portable exhibit booth and auditorium combined has been displayed at county agricultural fairs during the past six years. Motion pictures are shown in the auditorium which seats about seventy-five persons. Exhibits include items of forest fire fighting equipment, a live wildlife display, various furs, an operating model of a sawmill, and miscellaneous items pertaining to general forestry. This booth has been attractive to the many persons attending the county fairs and undoubtedly has been of great educational value.

The Department has available a number of

Fawn deer at the Department's exhibit booth. D. A. S. Dyer

bulletins and leaflets, which are distributed at the booth, to schools and at local gatherings, on wildlife, woodlot management, conservation, insects, and other subjects related to forestry.

The promotion of farm woodlot management is undertaken by the District Foresters. In addition they frequently are presented with the opportunity to exchange information with operators in connection with the "Small Tree Act" inspections. A few illustrative projects on phases of forest management have been undertaken on Crown Lands.

The Wildlife Park recently opened at Shubenacadie has gone far beyond expectations in popularity with holiday and week-end visitors. A number of large pens have been set up in natural surroundings to house a very good representation of the wildlife of the Province. Many persons for the first time have been able to see foxes, raccoons, skunks, bears, wildcats, deer, beaver and several of the wildfowl species at the park.

Conclusion

The forests of Nova Scotia have played a very important part in the economy of this Province. The beauty and pleasures of the forests and the wildlife have provided relaxation and recreation of which less fortunate peoples in many areas of the world have been deprived.

Although the Department of Lands and Forests might be considered as a guardian of these forest resources, all efforts toward conservation through fire protection, research and forest management are of little avail if there is a lack of public appreciation of this great forest heritage.

Nova Scotia is indeed fortunate in the general desire of its people to conserve this heritage for the generations to come.

Sorel—Past and Present

by D. R. WESTON

Photographs courtesy of Public and Industrial Relations Ltd. except where credited.

THE historian digging into the past of virtually any city of importance will find, in a great many instances, that the foundations of the city are rooted in military necessity. There is hardly an important city anywhere in the world—and it should be borne in mind that the importance of a city does not necessarily rest on the size of its population—which is not situated on a waterfront, whether it be river, lake or ocean, and in almost every case the founders were military men with a sharp eye for the strategic value of the site.

No exception to this rule is the city of Sorel, approximately 50 miles northeast of Montreal at the confluence of the St. Lawrence and the Richelieu Rivers. The city is built on the east bank of the Richelieu and one side of it faces the St. Lawrence.

The early explorers of Canada recognized the value of the site. Abbé A. Couillard-Després, in his *Histoire de Sorel*, points out that the locality was visited by Champlain in 1609 and again the following year, when he fought a battle with the Iroquois. The Richelieu River was the eastern boundary of their territory and was the natural highway to the St. Lawrence. The Iroquois frequently travelled it to harass the various French settlements along the latter. To check these attacks the Governor of New France, Charles Hualt de Montmagny, in 1642 constructed a fort at the present site of Sorel. It was known as Fort Richelieu, and in 1647 the Iroquois destroyed it.

Twenty-three years later the Marquis de Tracy in preparation for an expedition against the Indians took possession of the site, and

At top:—Sorel, looking eastward; at right, beginning of huge Marine Industries Limited premises; in centre background, Canada Steamship Lines Limited liners in final wintering in Richelieu River.

Photograph courtesy of H. H. Sheppard.

assigned the task of building a new fort there to one of his officers, Captain Pierre de Saurel. Captain Saurel was granted the military seigniory, and soon settlers—largely discharged or retired soldiers — began to farm and engage in other occupations in the area. The community eventually was given his name.

Sorel continued to have a military character until the end of the American Revolution. It fell into the hands of the Americans in 1776, but was relieved by "Gentleman Johnny" Burgoyne. During the war of 1812 the Americans again occupied the town but retreated from it following their failure to capture Quebec.

Sorel provides a wealth of material for those interested in the early history of our country. It has long been a major shipbuilding centre. The craftsmen employed today in the sprawling yards of Marine Industries Limited are both lineal and collateral descendants of the artisans of more than 200 years ago who fashioned wooden sailing ships with crude tools. One of these early shipbuilders was John Molson—who achieved success in other lines of business; while others were the McCarthys, who turned out more than one hundred vessels.

United Empire Loyalists from the United States spent the winter of 1783-84 in Sorel but moved to the Eastern Townships and Ontario in the spring. The first Anglican Church in Canada was opened in the town in 1785 on Christmas Day. In 1787 Sorel was visited by Prince William Henry, who later became King William IV. The young man so charmed local society that the leading inhabitants decided to honour him by changing the name of Sorel to William Henry. However, the old name was so firmly attached to the community that within a few years the new one was discarded and Sorel again was known as Sorel.

In a brief history of Christ Church, compiled some years ago at Sorel, the following anecdote is related:

An aerial view of Sorel showing the Richelieu River (foreground) with ships anchored in the basin of Marine Industries Limited. In background is the St. Lawrence River.

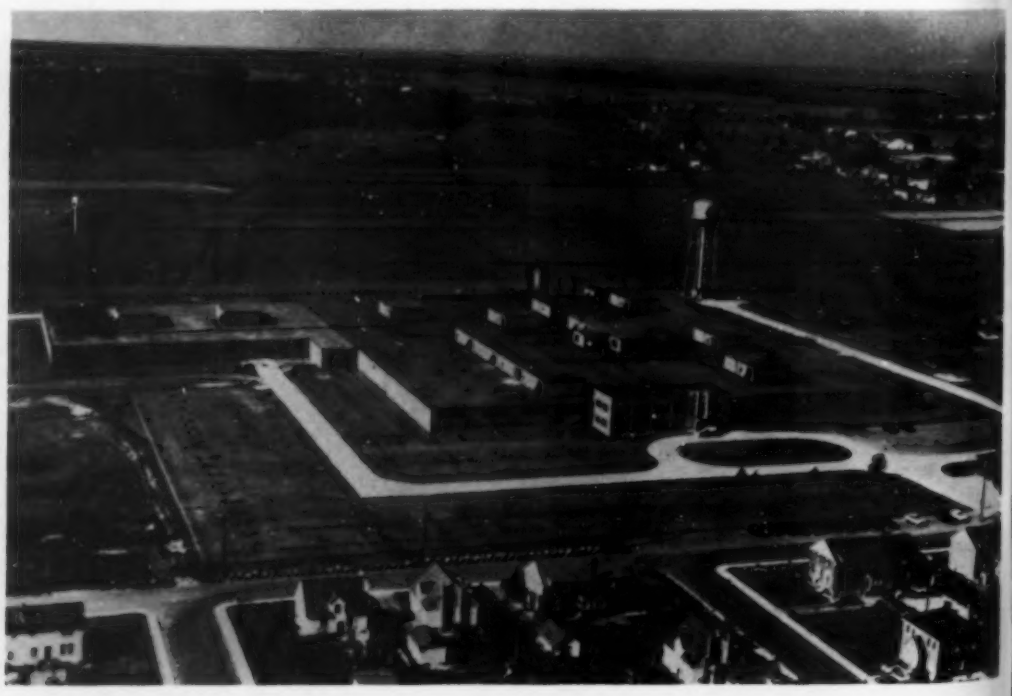
Photographic Surveys (Quebec) Ltd.

The largest private armament plant in North America, shown here, is at Sorel. It is Sorel Industries Limited.

"In 1796 a most singular case of medieval superstition occurred. A man named Jean Pailly was found murdered in his house; searching enquiry was made with no result. Resort was then had to the ordeal of touch, the theory being that if the guilty party touched the corpse, blood would flow from it. The body of the murdered man, with head and breast uncovered, was publicly exposed in the market place, and proclamation was made, that under penalty of imprisonment, all the males of the town above a certain age, should then and there be present. At the same time the whole of the military in garrison, by order of Capt. Dickinson, R.A., the Commandant, were similarly mustered and then marched round the body, each man in passing being made to touch the murdered man, 'but', records an eyewitness, 'there was no sign given by blood, this however clears the town of innocent blood shed in it.' "

Although a town may be born of military necessity, it cannot endure and grow to any stature without some economic base. Sorel, with a deep water connection with the Atlantic, quickly became a port. Because of its ship-building facilities, related industries sprang up. It also became an important market centre as settlers tilled the rich black soil.

With excellent rail and water transportation systems, good highways and bus lines, the city has grown slowly but steadily. Although Marine Industries Limited and Sorel Industries Limited are the largest employers of labour, the city offers an excellent example of diversification of industry. Currently there are

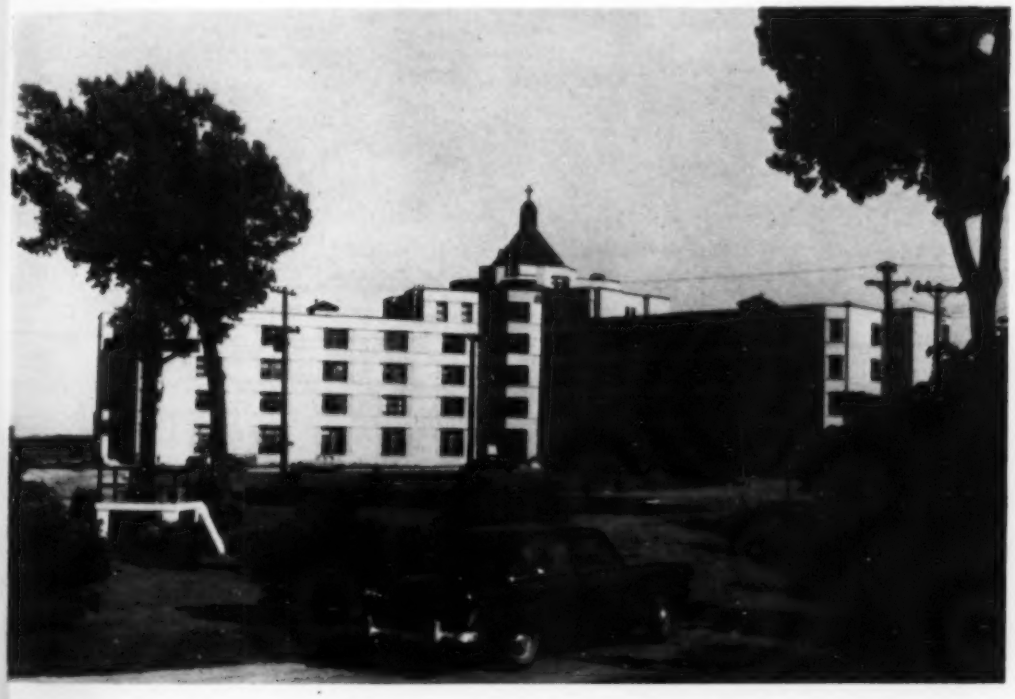


Another example of the variety of Sorel's industries. The plant of Canadian Celanese Limited.

approximately thirty different types of industry located in Sorel and its suburbs, Tracy and St. Joseph de Sorel, in addition to the usual retail and wholesale establishments, banks, insurance offices and miscellaneous businesses.

For the port the navigation season runs from about the middle of April to about the middle of December. Commodities handled include grain, hay, coal, molasses, crude sulphur, wood-pulp, titanium ore, and so on. Sorel, incidentally, was the original home port of Canada Steamship Lines, today one of the largest inland shipping companies in the world.

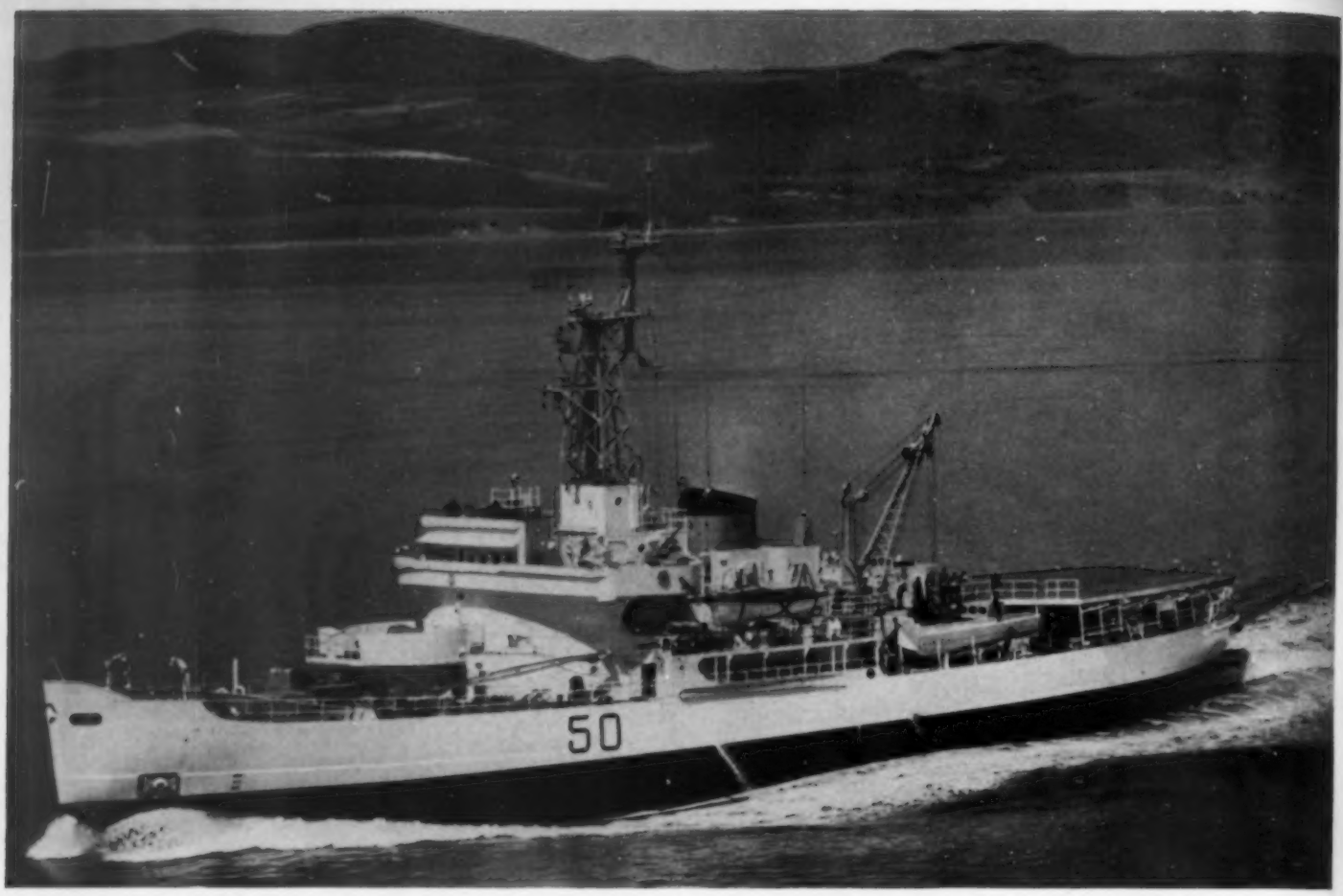
Leading employers in Sorel are the Simards, whose interests include Marine Industries Limited, Sorel Industries Limited, Sorel Steel Foundries Limited, North American Elevators Limited, the Saurel Hotel, Richelieu Knitting Company, and dredging, shipping and towing fleets. Other major employers are Canadian Celanese Limited, with a 225,000 square-foot plant and Quebec Iron and Titanium, with a $20,000,000 plant for the separation of iron ore and titanium.



St. Joseph's Hospital at Sorel. Modern in design and equipment, it is a credit to the community. More than 200 patients at a time can be accommodated in the institution.

In addition to daily passenger and freight service during the navigation season to Montreal, Quebec and the Saguenay, barges operate on the Richelieu, touching at Lake Champlain ports, Albany and New York. There are seven main docks, provided with grain elevators, freight sheds, and an electrical trans-shipping tower, and there is rail service to all wharves. The docks stretch about a mile and a half along both the St. Lawrence and the Richelieu Rivers, and anchorage space in the basin is nine miles long, two miles wide and 30 to 50 feet deep. The grain elevator operated by North American Elevators Limited has a capacity of 3,000,000 bushels and a loading rate of 140,000 bushels an hour.

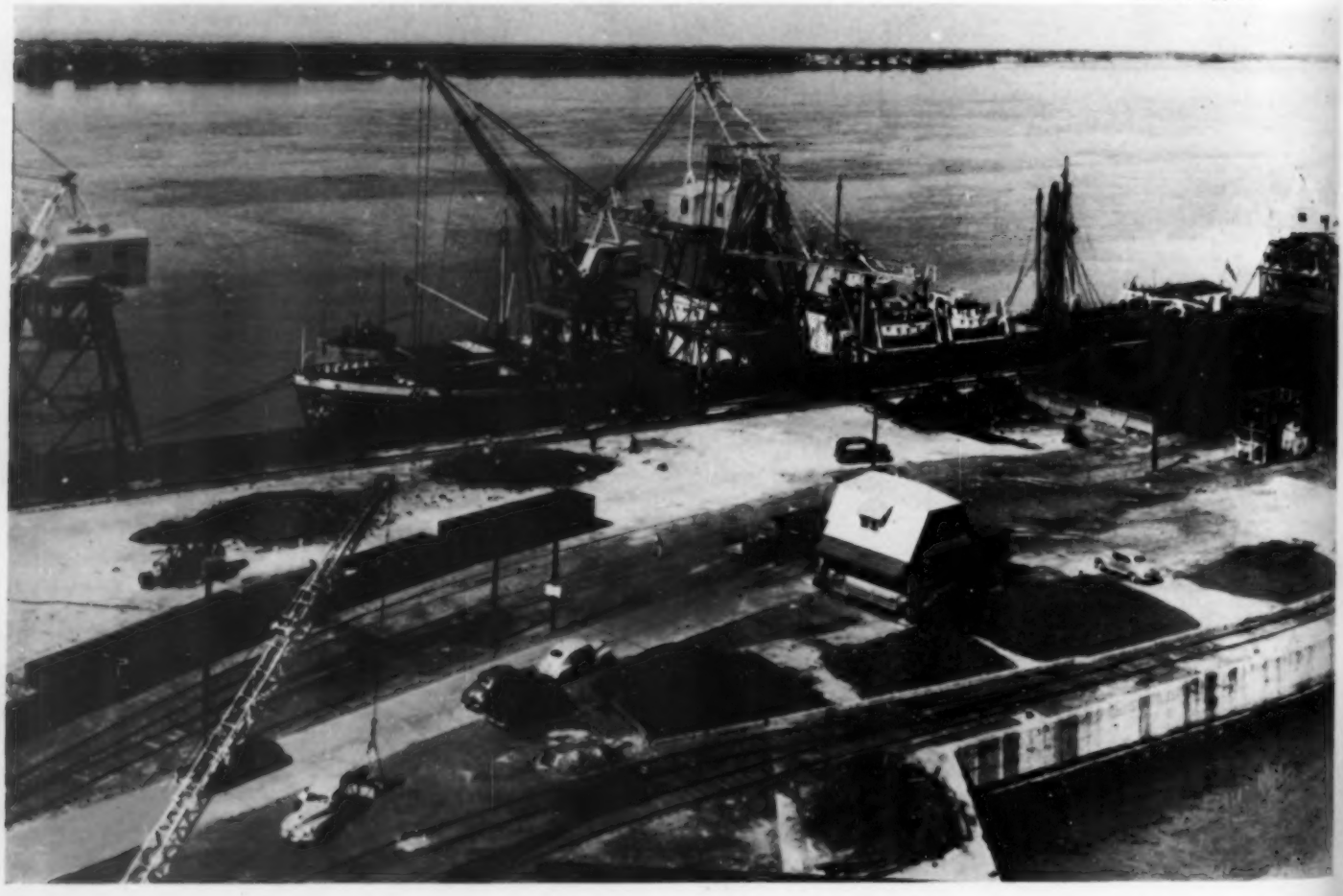
One of the major projects recently completed by Marine Industries Limited was construction of H.M.C.S. *Labrador*, a 5,400-ton 269-foot ice-breaker and arctic patrol vessel, the largest and most complicated naval ship ever built in Canada. Last year the *Labrador* became the first naval ship ever to circumnavigate the North American continent and in June of this year she sailed for a six-month stay in the Arctic. The shipyards are now working on other R.C.N. ships, both new and conversions.



H.M.C.S. Labrador, *largest and most complicated naval vessel ever built in Canada and the only one to circumnavigate the North American continent. She was constructed by Marine Industries Limited.*

The south shore of the St. Lawrence River at Sorel, showing some of the equipment for handling bulk freight. The docks extend for about a mile and a half along the St. Lawrence and Richelieu Rivers.

H. H. Sheppard.



The company operates its own dredging fleet, said to be the largest in Canada, and one of the most modern and complete in North America. With its skill and internationally gained experience, the company is prepared to tackle submarine excavation anywhere in the world.

Other departments of this company include a wood-joining shop which has turned out television cabinets, church pews, furniture, window frames, doors and panelling. Out of its machine-shops have come "banjo" signs for gasoline stations, sheet metal pipes, smelter stacks and industrial space-heaters. The company also operates a 150-ton shear-leg crane, which has unloaded locomotives for the Iron Ore Company of Canada. Last year it was used to unload a 110-ton electrical unit for the Hydro-Electric Power Commission of Ontario, as the unit was too heavy to be handled by Montreal harbour cranes.

Sorel Industries Limited contains the largest private armaments factory in Canada. It is the only major artillery manufacturing centre in the western world in which work is carried through from melted scrap to completed weapons. During the war the company propuced the famous "25-pounder" which played a major part in defeating Rommel at El Alamein. Now, the company is producing .50 calibre naval guns. These are generally considered to be the world's most effective surface and anti-aircraft naval guns, and are said to be the most complicated weapons ever built in Canada. Some 125 different metals are required to build them, and there are 28,000 different parts with tolerances, in some instances, of half the thickness of a human hair.

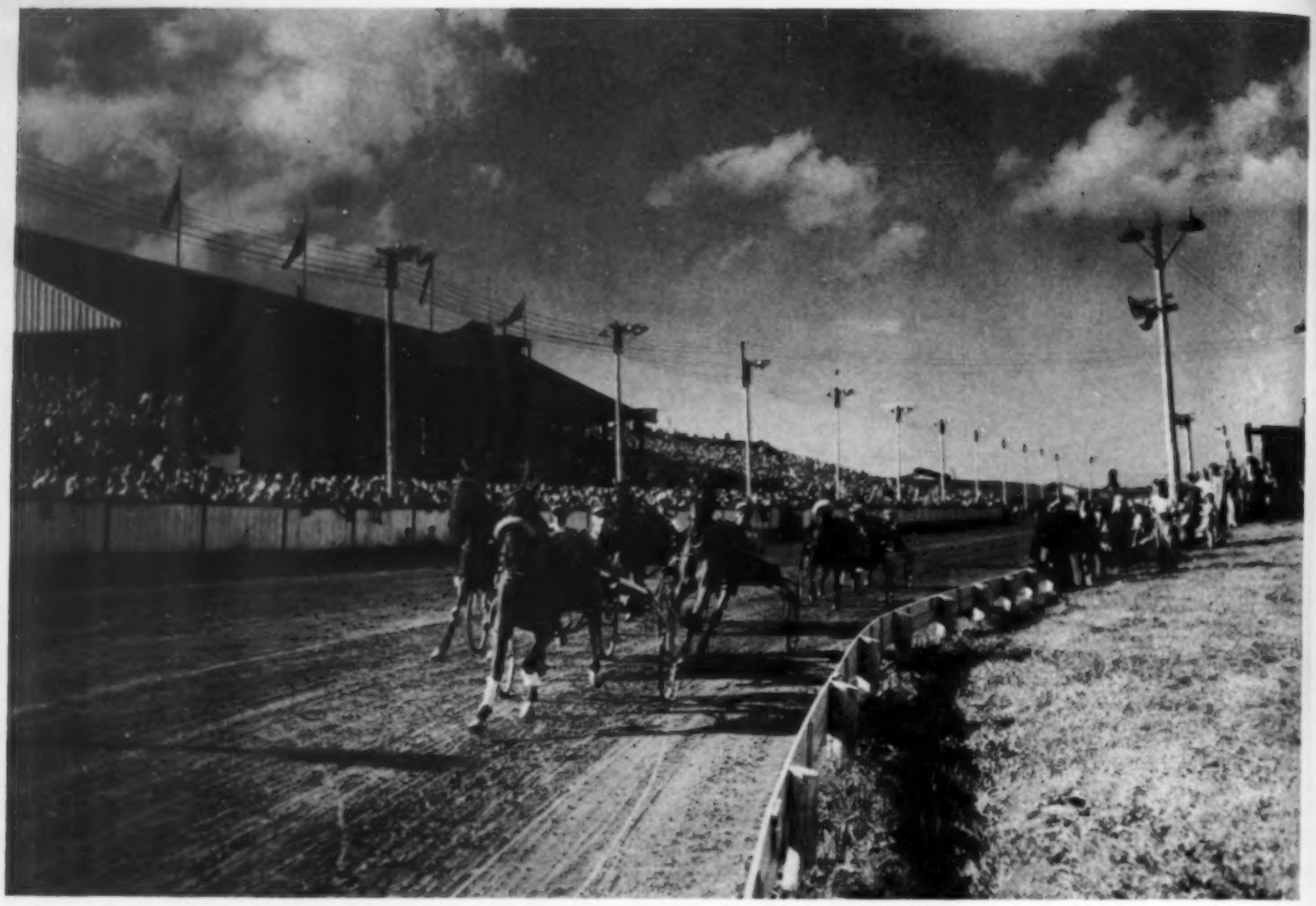
Sorel Steel Foundries Limited is one of the oldest continuously operated businesses in the city, having been in existence almost one hundred years. The company specializes in manganese alloys and steel castings. In addition to the shipyard, customers include mining, dredging and heavy construction equipment companies across Canada. Its biggest job was to construct a 36,000-pound dredging dipper.

What effect the St. Lawrence Seaway will have on Sorel is anyone's guess, although harbour facilities are being studied at present with a view to making extensions and modifications to handle increased business.

As Sorel played an active part in fighting for freedom during both world wars—during the First World War its shipyards turned out a great number of trawlers and drifters for use against submarines—so in peacetime the city is making an important contribution toward the economy of Canada. The Quebec Iron and Titanium Company's new plant is treating iron ore and titanium from its open-face mine at Allard Lake, Quebec. Other plants are producing furniture, clothing, ornamental iron work, cement, machinery, textiles, mirrors and scores of other products.

The city has also become popular as a recreational centre. During the summer river boats make weekend trips from Montreal and there is excellent fishing around Sorel Island where perch, dory and bass abound. Sorel has a nine-hole golf course, tennis courts, and a yacht club. One may also hunt or swim in its vicinity.

Sorel has seen many changes during the 290 years since its founding by Captain Pierre Saurel. It has developed from a tiny colonial settlement dependent on a fort for protection and on the land for livelihood to a prosperous city and important industrial centre. Indeed, its industry is so diversified today that even if the important contracts for shipbuilding and repairs were to be greatly reduced, most of the workers would still be able to find employment in the city. Regardless of the influence of the St. Lawrence Seaway, Sorel's future appears assured. With ample room for expansion, land costs at reasonable levels and a large local labour force, there is every reason to anticipate that it will continue to grow.



The crowd thrills as sulkies race past the grand stand in Charlottetown's Fair Grounds. N.F.B.

Harness-racing in Prince Edward Island

by JOHN B. MURLEY

ENTHUSIASM for track horse-racing burns very brightly in Canada's smallest province, Prince Edward Island. The flame is all the more conspicuous because motor traction has done so much to push the horse off the highways and farms, but it has in no way diminished the islander's passionate love of the race-track.

From early summer until late autumn the trotters and pacers hold the spotlight at one or other of the Island's two principal race-tracks, located at Summerside and Charlottetown, on an average of three nights a week. In addition, rural race-tracks conduct day meets on Wednesday afternoon half-holidays and on some legal holidays. Crowds, colour, excitement, and of late years, pari-mutuel betting, dominate the meet, whether it be held at the famous old Charlottetown track or one of the less pretentious rural tracks.

All this summer racing leads up to the culminating glory of the Old Home Week and Charlottetown Exhibition which has been held every year in mid-August since the beginning of this century. This year more than 200 horses will be stabled at the Charlottetown Fair Grounds, and the horses will race both day and night during the six days of competition. Some will come from New Brunswick and Nova Scotia, and there will be a few entries from

Quebec and the United States, but the majority will be owned by the islanders themselves.

Along with the horses comes the racing fraternity from Sydney, Glace Bay, Halifax, Truro, New Glasgow and Bridgetown, Nova Scotia; while New Brunswick adds her contingent from Saint John, Fredericton and Woodstock. These devotees are all wise in the ways of the track and keen judges of horses, and all of them keep a sharp eye on the overnight betting-pools and the pari-mutuel board.

At the trackside and in the crowded stable area, in hotels and restaurants, the invading horde will mingle in fraternal good humour with their fellow enthusiasts of the Island to gossip about the day's racing or to discuss the programs of the days to come. As everyone shares the love of horse-flesh, the talk will also turn to great meets of the past, records and breeding, colts and fillies, blood strains and sires, brood mares, training methods, drivers, and all that pertains to horses.

There are no great stock farms in Prince Edward Island, such as exist south of the international border, but many a prosperous Island farmer has bred a pedigree colt or filly. Even if he does not take an active part in racing, he will frequently raise a colt for sale if he can get a good price. Some of these aristocratic youngsters will never see a racing oval but many of them will be on exhibition at the Prince Edward Island Futurities held every year in late August or early September. They lack nothing in noble lineage; they come from such famous stock as *Peter the Great*, one of the greatest standard bred sires of all time, from the celebrated *Axworthys*, and from cross-matings of these famous blood lines, which derive their power from the greatest of all harness-racing sires, *Hambletonian Ten*.

In the early days of turf-racing in Prince Edward Island thoroughbreds held sway, and flat racing on a small scale enjoyed some popularity on a straightaway track near Charlottetown. Between 1820 and 1850 some excellent sires were imported into the province from England, including *Saladin*, bred from the famous stud owned by Lord George Bentinck. Good horses had also been brought in from France by the early French settlers. When crossed with the English thoroughbreds, they produced a very fine type of animal. One of the most famous of the imports was *Flying Frenchman*, a stallion from Quebec.

Harness-racing did not become established in Prince Edward Island until the 1880s. At Halifax in 1888 a horse named *Black Pilot* owned by Ben Dockendorff of Charlottetown won the $500 stallion race, and came within a split second of being the first Maritimes-bred horse to trot the mile in two minutes and thirty seconds. Another notable event was the record of two minutes and fifty-eight seconds set by a yearling named *Parkland*, owned by a celebrated turf-breeder of that day, W. A. Brennan of Summerside. These records were made in the days of high-wheel sulkies, more cumbersome vehicles than the light-weight rubber-tired sulky of today. American sires and brood mares were imported from time to time. One of them named *Alright*, famed for his speed, was purchased as a four-year-old for $3,000 by Mr. Newton Lee; this stallion was the sire of *Black Pilot*.

As the popularity of harness-racing grew, training methods and conditioning became fine arts. Half-mile racing ovals were graded and groomed to permit better and faster perform-

Photographed as she crosses the finish line at Charlottetown's Driving Park, **Little Delbert** ***(centre) wins a close race from*** **Miss Donna Mae** ***(foreground) and*** **My Darling.**

Godfrey Racing Service

ances. (Perhaps it should be pointed out that races on the half-mile track are over the one-mile distance.) By 1902, *Ada Mac*, sired by *Parkside*, was pacing the mile in 2.18½, and three years later this same mare lowered her mark to 2.17. The situation was further improved when Senator John Richards brought back from the United States a sire named *Captain Aubrey*, begotten by the renowned *Peter the Great*, mentioned earlier. *Captain Aubrey's* best racing time for the mile was 2.07¼. The descendants of this fine animal were noted for their speed, courage, and stamina. Even today the *Aubrey* strain, crossed with other stock from *Peter the Great*, still ranks high with Island breeders. *Captain Aubrey's* sons and daughters paced or trotted into prominence, and such names as *Colonel Aubrey*, *Keemah Aubrey* and *Mac Aubrey*, appeared at the top of the race summaries. *Colonel Aubrey* was bred, trained, and raced by one of the best-known Island racing families, the O'Briens of Alberton. For many years Harry and Jim O'Brien have owned top flight performers, including such great pacers as *Lucky Lindy* and *Billy Cope*, both of whom did the mile in better than 2.10 in the 1930s. More recently the O'Briens raised *Just Rita*, the great three-year-old of the 1953 season, and in 1954 an even faster three-year-old, *Jerry's Nightmare*, which paced a mile in 2.09¾.

Most noted of the O'Brien family is Joe, head trainer for the well-known S. A. Camp stables at Shafter, California. He is still in his thirties and has won more than $1,000,000 for Mr. Camp since taking over the management of the stables some years ago. He is rated as one of the truly great trainers of drivers in the United States. He served his early apprenticeship in his father's stables at Alberton, and became the most successful driver in the Maritime Provinces. He then sought wider opportunities in the United States where his rise to fame has been meteoric.

There are, however, so many great names of breeders, drivers, and patrons in Island racing history, that it would be impossible here to do justice to them all. They include people in many walks of life—farmers, doctors, businessmen, soldiers, sailors, politicians—all have helped to build up the story of sulky-racing in the province. One may perhaps mention a few representative names such as Colonel D. A. MacKinnon, D.S.O., who is still an active driver. "Colonel Dan", as he is called, has been a central figure in Maritimes racing, and even farther afield, for forty-five years, except for a four-year period when he commanded a field battery in France during the First World War. His racing career and the performances of the scores of horses that have passed through his hands would not fit into this brief review of Island racing history. Until recent years he had ten or more trotters and pacers in his stable, but he now has only three. His name became a household word in the Island as managing director of the Charlottetown Driving Park and Exhibition Association. He organized the Annual Provincial Fair and made it into the great spectacle that it is today. He sold his interest in the Exhibition plant after the Second World War; however, the honoured tradition which he established is now being carried on by a very able new directorate.

As far back as 1914 he was winning races with *Helen R.* who paced an exhibition mile in 2.12½. After the First World War his trotter *Heather Belle* held the Charlottetown trotting record of 2.08¾, and in 1924 he established a world's record on ice when his trotter *The Yank* covered the half-mile track at Lansing, Michigan in 2.15½.

The Kellys of Southport, which lies just across the river from Charlottetown have been associated with Maritimes racing for more than half a century. The late Hammond Kelly and his two very competent sons, Williard and Lorne, made their mark in racing history. Williard was an outstanding breeder, trainer, and driver up till his death about two years ago. He improved the speed of the horses in the Kelly stables by importing *Kalmuck*, son of *Peter the Great*. *Kalmuck's* progeny proved to be winners on many race-tracks of Eastern Canada. Two mares in particular, *Millie Kalmuck* and *Nell Kalmuck*, both owned and raced by Williard Kelly, were favourites on Maritimes tracks for many years. Speedy, tough, game, they always paid their way.

The list of famous racing names is a long one,

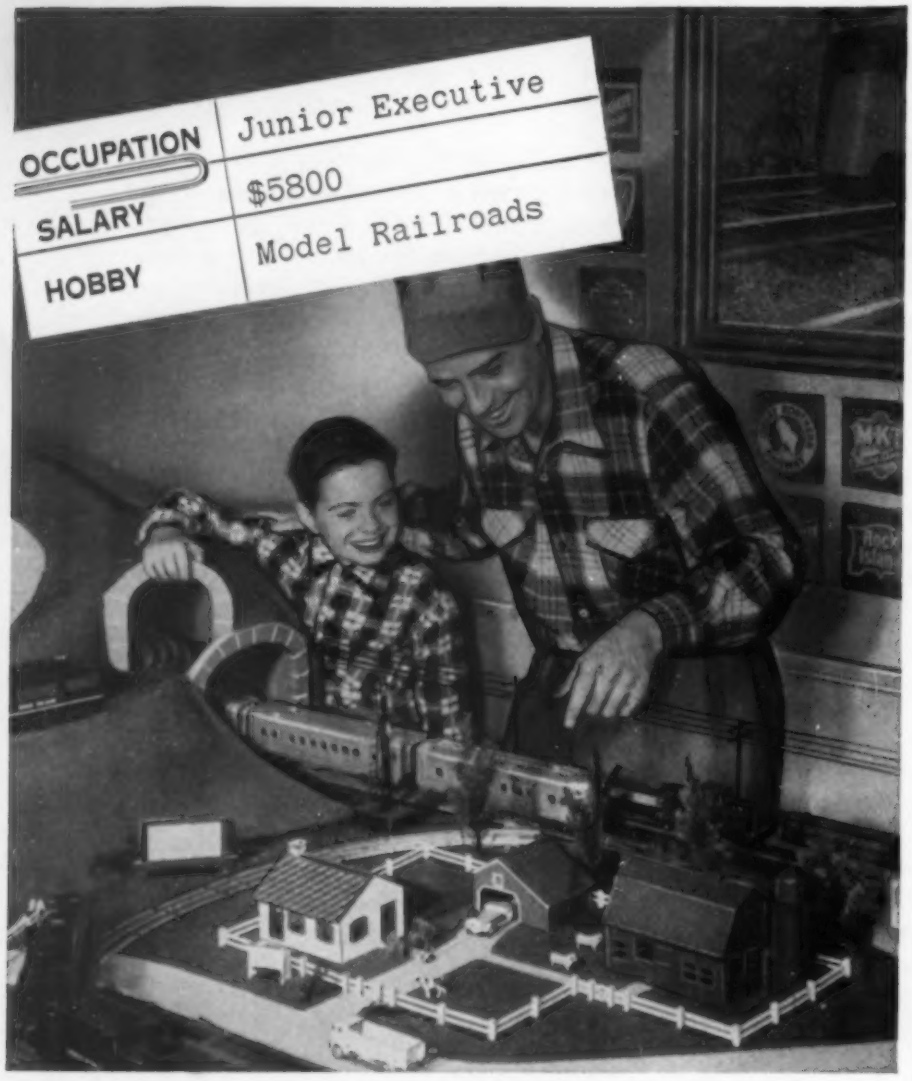
and among the most honoured, Charlottetown has contributed: Dr. J. S. Jenkins, Colonel J. P. Hooper, Mr. G. H. Hooper, Dr. F. C. Dougan, Dr. R. F. Seaman, and Commander G. H. Buntain. From Montague we have Dr. Preston McIntyre, Mr. George McIntyre, and Mr. John Annear. Also to be named are Mr. Tyndall Semple of Kensington, Mr. George MacDonald of Mermaid, and Mr. George Calbeck of Summerside.

When racing started on Island courses early in June, every entry list carried the name *Budlong*, reflecting the popularity of that fine sire *Calumet Budlong*, purchased by Mr. Frank McKay of Charlottetown in 1937. Today his descendants rank as high as those of *Captain Aubrey* and *Kalmuck*.

Early in the summer horses are moved into quarters at the Charlottetown Driving Park, and start training for the night racing which begins in June and continues throughout the summer. There are also side trips to Truro, Chatham, Moncton, and other tracks in the Atlantic provinces. The night meets usually comprise eight dashes, for which the competitors are classified on their past performances—a task that requires skill, diplomacy and patience. Every horse-owner would like his entry to have an edge on the other competitors. There is a draw for starting positions before the programs are printed, and the same horses race two heats or dashes against each other during the evening. A purse is awarded for each dash, of which 50 per cent goes to the winner, 25 per cent to the horse finishing second, 15 per cent to the third horse, and 10 per cent to the fourth.

The opening race of the year draws between 2,000 and 3,000 people but crowds up to 10,000—that is about one-tenth of the entire population of the province—attend the main event of the year, the Charlottetown Exhibition in mid-August. The horse indeed comes into his own in this race-loving community.

Summer racing reaches its climax at Charlottetown Exhibition during Old Home Week in mid-August.
P.E.I. Travel Bureau



Where does he bank?

It's hard to tell whether this junior executive or his son gets the more fun from standing at the controls of their model locomotive. For the father, it provides complete relaxation from a stimulating and promising business career. As with many successful young men, he formed his "good money habits" early in his career by depositing regularly in a savings account at The Canadian Bank of Commerce. So many of our savings account holders are people "on the way up". The Canadian Bank of Commerce helps you along the way, too, perhaps with a personal loan toward buying a car, or an NHA mortgage loan for a home of your own. Bank services contribute to better living . . . more rewarding work. Anyone in any branch of The Canadian Bank of Commerce will be glad to help you open an account soon.

THE CANADIAN BANK OF COMMERCE

More than 700 branches across Canada

EDITOR'S NOTE-BOOK

Hugh A. Dempsey (*Alberta Through the Years*) is on the staff of the Publicity Bureau of Alberta's Department of Economic Affairs. Before he accepted this position in 1951, he was provincial editor of the *Edmonton Bulletin*, which has now ceased publication. He is the author of a booklet, *Historic Sites of Alberta*, and is an executive member of the Historical Society of Alberta.

* * *

Adelaide Leitch (*The Island Galaxy of Georgian Bay*) is a contributor familiar to most of our readers, since many of her articles and photographs have been published in this magazine. A graduate of the University of Toronto, she has travelled extensively in Canada and Europe, recording her impressions with an eloquent pen and camera.

* * *

Lloyd S. Hawboldt (*Forestry in Nova Scotia*) is Provincial Forest Entomologist in the Department of Lands and Forests of Nova Scotia. He joined the staff of the Department in 1944, and since then has been associated with various aspects of the forest service of the province.

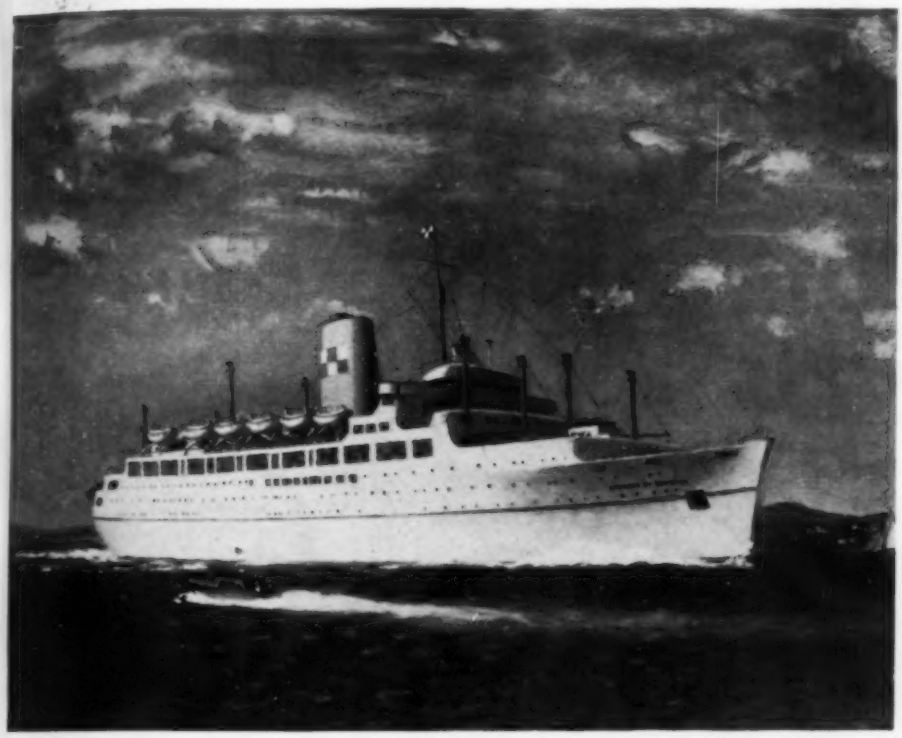
* * *

Douglas R. Weston (*Sorel — Past and Present*) has done freelance writing for various Canadian publications. Formerly an employee of the *Montreal Gazette*, he is now doing public relations work for Public and Industrial Relations, Limited of Montreal.

* * *

John B. Murley (*Harness-racing in Prince Edward Island*) lives in Charlottetown and, like many islanders, is fond of horses and likes to attend the harness-races. He has written for newspapers in Charlottetown and Halifax. For the past fourteen years he has been manager of the National Employment Office in Charlottetown.

THE TRAVEL CORNER



The handsome new liner Empress of Britain, *as painted by the artist Norman Wilkinson.* C.P.R.

Empress of Britain

Canadian Pacific Steamships' *Empress of Britain*, launched recently by Her Majesty, Queen Elizabeth II, is now being fitted out and is expected to make her maiden voyage next spring. The 24,000-ton ship is the first C.P.S. vessel to be launched by a reigning monarch. She is the third to be named *Empress of Britain*. The first, a ship of 14,189 tons launched about 50 years ago, was later rechristened the *Montroyal*. After years of service she was scrapped. The second of the name, launched in 1930, was a 42,500-ton ship, the largest ever built for C.P.S. During World War II she was lost by enemy action. The new *Empress of Britain* was launched from the same slip in the Fairfield Shipbuilding and Engineering Yards of Govan, Scotland, down which the first of the three ships slid half a century ago. She is to sail between Liverpool, Quebec and Montreal when she enters service next year.

C.N.R. Summer Rates

From now until 5 September the Canadian National Railways will offer reduced fares for return trips on first class tickets to Eastern Quebec and the Maritimes. The only proviso is that the journeys to and from one's destination must be made within a 25-day period. The tickets will be sold at normal one-way first class fare plus one-half fare.

Group Flights

Groups of ten or more persons flying to places in North America are offered special rates by Trans-Canada Air Lines. To be eligible for these rates, groups must meet the following requirements:

(i) There must be ten or more persons travelling together for a specific purpose.
(ii) A special application form must be signed and submitted to T.C.A. by the person in charge of transportation for the group.
(iii) The members of the group will be expected to travel together on the same aircraft.

When round-trip tickets are issued, members of the group will be permitted to stay over at points along the return route. The application forms may be obtained from any T.C.A. office.

Thrift Season in Europe

We would like to remind readers that the season in which travel to

(*Continued on next page*)

IT'S SO

restful

ON THE

TCA

VISCOUNT

You'll marvel at the swift, smooth, restful flight of the Viscount . . . the remarkable lack of vibration as her four Rolls-Royce propeller-turbine engines wing you on your way at an effortless five miles a minute.

Extra-large windows. Beautifully appointed air-conditioned cabin. Comfortable two-abreast seating.

Be one of the first to fly Viscount on this continent. (The Viscount has already flown more than 800 million passenger miles in Europe.) Viscounts are now in service on many Canadian inter-cities and U.S. border routes.

See your travel agent or the nearest TCA Office.

TRANS-CANADA AIR LINES

One of the world's great airlines

Are you any nearer this year to making that all-important down-payment? Or were your last twelve months of hard work wasted — as far as your savings are concerned? Your savings are the only part of your income that can buy the deeds to your 'dream' house. So — start saving in earnest at the B of M from now on . . . and move closer with each pay-day to 'moving in' day!

"MY BANK"
TO 2 MILLION CANADIANS
B of M

BANK OF MONTREAL
Canada's First Bank

D1918

(Continued from previous page)

Europe is most economical is approaching again. From October till April there will be reductions in fares on ships and aircraft crossing the Atlantic Ocean. In Europe some of the hotels will offer lower rates. As the great influx of tourists will be over, there will be less competition both for transportation facilities and hotel rooms. And with the rush and confusion of the summer season at an end, there will probably be better service everywhere.

Italian Line Changes Schedule

In October the motor vessels *Saturnia* and *Vulcania* of the Italian Line will make their terminal port Trieste instead of Naples. Two additional ports of call, Venice and Patras (Greece), have been added to their itineraries. This fall the ships are scheduled to sail from New York on 4 October, 19 October, 14 November and 25 November. The voyage from New York to Trieste—with stops at Lisbon, Gibraltar, Palermo, Naples, Patras and Venice en route—takes about 16 days.

Anyone planning to travel extensively in Italy may be interested to know that interpreters have been placed on the international and domestic trains of Italy for the convenience of foreigners who do not speak Italian. Besides interpreting, they are authorized to change foreign currency at official exchange rates.

K.L.M. Purchases New Equipment

K.L.M. Royal Dutch Airlines is modernizing its fleet of aircraft. The company has announced that it will be acquiring nine new Vickers Viscounts of the 803-type in 1957. It has also ordered ten new DC-7C aircraft.

Canadian Sports Events

It may be early to mention football; however, fans might like to take note of the date, 26 November. The Grey Cup will be held then in Vancouver. It will be the first time that Vancouver has been the scene of this important game.

Meanwhile, there is golf all across the country. Here are the dates on which some of the major golf tournaments will be held on Canadian courses:

17-20 August—The Canadian Open Tournament, Weston, near Toronto, Ontario.

25-28 August—The Labatt Open Tournament, Summerlea, Montreal, Quebec.

4-10 September—The Totem Pole Golf Tournament, Jasper Park Lodge, Jasper, Alberta.

this SEPTEMBER
visit ALBERTA'S
Mountain wonderland

ALBERTA OFFERS YOU SO MUCH MORE!

For sublime majestic Rocky Mountain beauty, Alberta with its fabulous Banff, Jasper, and Waterton National Parks, offers "fifty Switzerlands in one". Magnificent too are the prairies at harvest and the Red Deer River "Badlands" at sunset. September is the finest month. Pleasant weather, warm days, cool nights, forests ablaze with autumn colorings, brilliant sunshine, clear skies and crisp clean air, traffic over modern highways lighter after the rush, and accommodation (government graded and priced at popular rates) easier to get, make it the best month for your holiday.

ALBERTA
1905 · 1955
50 GOLDEN YEARS

SEPTEMBER too, is JUBILEE MONTH in Alberta when 50 YEARS of fabulous growth will be OFFICIALLY CELEBRATED.

WRITE FOR free booklet and map. Send this ad along with your name, address and age to the Alberta Travel Bureau, Legislative Building, Edmonton, Canada.

CAG-1

CANADA
VACATIONS UNLIMITED

A
Pride worthy book

IMAGE OF CANADA

Selected photographs from this Journal synthesized into a picture of the Canadian scene, resources, and people

$5.50

from your bookseller, or

THE CANADIAN GEOGRAPHICAL SOCIETY

54 PARK AVENUE, OTTAWA 4

or

THE RYERSON PRESS
TORONTO

B.E.A. Helicopters

Regular helicopter service has been introduced between London, England and its airport 15 miles away. The service is operated by British European Airways. There are six or more flights a day. Although this means of travel costs several times as much as ordinary motor-coach, there are many occasions when the saving in time warrants the extra expense. The helicopters follow the course of the Thames River except for a stretch close to the airport, and they make the journey in 15 minutes as compared to the 50 minutes by road.

Five years of cautious experimentation preceded the inauguration of this service. Ultimately B.E.A. expects to operate helicopters to and from many cities and towns over distances ranging from 50 to 250 miles. It is anticipated that larger machines than those used at present will be acquired and that there will be seats for 40 passengers in them.

Thousand Islands Cruise

This summer combination rail-boat tours are being conducted every Saturday by the Canadian National Railways from Montreal to the Thousand Islands of the St. Lawrence River. Trains leave Montreal at about nine o'clock in the morning (daylight saving time) and arrive at Brockville, Ontario, shortly after eleven o'clock. There passengers board small boats to cruise among the islands for four hours. The boats go almost to Gananoque and cross the river to Alexandria Bay in New York State.

Serving Canadian Advertisers Since 1873

HEAD OFFICE
300 BAY STREET
TORONTO

MORE FINE
CANADIAN PRINTING
APPEARS ON

Provincial Papers

THAN ON ANY
OTHER KIND...

Provincial Paper Limited
TORONTO, MONTREAL, WINNIPEG

CANADIAN GEOGRAPHICAL JOURNAL

BACK ISSUES WANTED

1930—May, August, September, November, December.
1933—January, February, March, April, June, August, September.
1934—January.
1936—March, May, September.
1938—December.
1947—January, February, July, August, October.
1948—February, April.
1950—July, October.
1951—January, July.
1953—October.

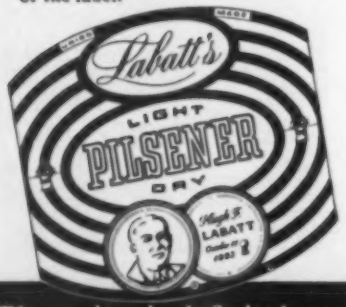
Before sending, please write, stating terms to:
THE CANADIAN GEOGRAPHICAL SOCIETY
54 Park Avenue, OTTAWA 4

Thirsty?

. . . TRY A PILSENER

Call that a beak? It's more like a beaker! And oh! for a beakerful of sparkling Pilsener. The lightness of Pilsener—lighter than ale—allows you to take deep draughts. And the unique dryness—drier even than lager—cures thirst like magic . . . the first refreshing trickle quickly turns a thirsty throat into a source of pleasure!
Try Labatt's Pilsener today—at home or in your favourite hotel or tavern.

The only beer in the world endorsed by brewmasters from seven *other* breweries. Made to the original Pilsen formula with yeast specially flown from Europe. See the BACK of the label.



The swing is definitely to
LABATT'S

HAVE A

Player's

"MILD"

THE MILDEST, BEST-TASTING CIGARETTE

PLAIN OR CORK TIP

IN MONTREAL

Men of affairs naturally stop at the WINDSOR because of its reputation for dignified comfort, unobtrusive, courteous service and its convenient location — and because the WINDSOR is recognized as the proper place for business and social meetings.

THE WINDSOR
ON DOMINION SQUARE

MAXIME RAYMOND, Q.C., *President*

- PRINTING
- LITHOGRAPHY
- CREATIVE DESIGN
- PHOTO-ENGRAVING

Gazette
PRINTING COMPANY
LIMITED

MONTREAL'S FIRST PRINTER

Established in 1776

UN. 6-3561 — 1000 St. Antoine St., Montreal.